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From Conflict to Cooperation:
The On-Site Inspection Agency as a Model
for
International Arms Control Organizations
by
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B.S., United States Military Academy, 1983

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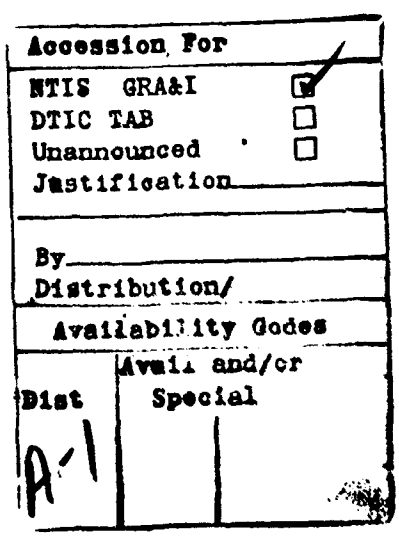
ABSTRACT

The major conclusion of this thesis is that the structure of intrusive verification regimes imbedded within internal treaty mechanisms provides incentive for international cooperation.



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EXECUTIVE SUMMARY

An international system is necessary in a multi-polar world. The problem for today is learning how to develop cooperation, not just assume it. Most striking was the level of cooperation involved in the area of nuclear weapons. The United States and the Soviet Union signing of the Intermediate-Range Nuclear Forces Treaty in 1987 ushered in an unprecedented acceptance of intrusive verification measures. Even after the demise of the Soviet Empire, cooperation continued with Russia and those former republics of the Soviet Union that had intermediate range nuclear forces on their territory. The puzzle surrounding this historic event is how the two sides managed to move from conflict to cooperation, from a zero-sum game to positive gains for both sides. Solving this puzzle may provide lessons learned from the Intermediate-Range Nuclear Forces Treaty that can be applied today to organizations such as the International Atomic Energy Agency and the United Nations Special Commission on Iraq.

Solving this puzzle will also help students of international relations to better understand how nations learn to cooperate. The area in which both of the former antagonists had the most visibility, nuclear arms, became an area of great cooperation. Although an arms treaty is assumed to be a product of cooperation, the internal structure of the treaty provides the best mechanism for evaluating its effect on signatory cooperation. Earlier arms control treaties have not produced effective implementation organizations. This illustrates that although cooperation was assumed given a signed treaty, expected cooperation did not expand or take hold. Even though a

certain level of cooperation leads to an agreement, this level of cooperation did not sustain itself. The internal structure of the implementation mechanism of a treaty helps build toward increased cooperation over time. An analysis of the On-Site Inspection Agency (OSIA) gives us an understanding of those internal factors, ignored until now, which directly affect the level of cooperation of those party to an arms control treaty. The expansion of the OSIA's mission to include several new treaties indicates that some valuable lessons already have been learned.

Naturally, an arms control treaty is not a panacea for developing international cooperation. A treaty may, on the other hand, persuade a state that is surveying the international scene to choose cooperation over conflict, but a signed and ratified treaty does not then guarantee compliance. However, the organization that implements the treaty specifications does play a larger role in the overall level of cooperation than previously considered.

The search for a new strategy in the post-Cold War era shows that reality is more complicated in a multi-polar environment. The simpler assumptions that explained the antagonistic situation no longer apply. An attempt must be made to find and develop those structures which may foster overall cooperation. Those states debating whether to cooperate in multilateral arms control regimes should be given an opportunity to cooperate. The area of arms control is a highly visible symbol of the willingness of a state to work with other nations, since this area directly relates to national security issues. As trust and cooperation became more important in a multi-polar world, the treaty verification structure which accompanies

arms control agreements also becomes more important. By placing inspections teams in a cooperative environment, beneficial to both signatory national interest and security goals, a level of cooperation and trust may be constructed which cannot be obtained by satellites or open source monitoring. Nations can learn to work together in an area vital to national security, arms control, by working together. Nations can learn by doing if the structure of the organization does not hinder the process. A possible means of cooperation through an international arms control organization is also discussed.

Rogue states are not considered in this cooperative regime. Treaties, and the organizations that implement them, do not guarantee compliance. The structure of organizations designed to implement arms control treaties, however, may influence those states sitting on the fence, deliberating cooperation or conflict. Cooperative arms control organizations may persuade these undecided nations towards cooperation and away from conflict. The effect of such factors on cooperation is discussed within the framework of existing and predicted arms control organizations.

The puzzle posed by the INF Treaty is whether internal factors of an arms control organization can solve the problem of building cooperation and if these factors might translate from bilateral to multilateral organizations. The structure of such an organization is critical to the organization's ability to fulfill its objectives and achieve success. Sustained cooperation, therefore, can be a product and precondition of the organization through the structure of a given treaty.

I. INTRODUCTION

The world is now in the Post-Cold War era. The collapse of the Soviet Union brought attendant changes in the previously bipolar world. An international system is necessary in a multi-polar world. The problem for today is learning how to develop cooperation, not just assume it. Most striking has been the level of cooperation involved in the area of nuclear weapons. The United States and the Soviet Union signing of the Intermediate-Range Nuclear Forces Treaty in 1987 ushered in an unprecedented acceptance of intrusive verification measures. Even after the demise of the Soviet Empire, cooperation continued with Russia and those former republics of the Soviet Union that had intermediate range nuclear forces on their territory. The puzzle surrounding this historic event is how the two sides managed to move from conflict to cooperation, from a zero-sum game to positive gains for both sides. Solving this puzzle may provide lessons learned from the Intermediate-Range Nuclear Forces Treaty that can be applied elsewhere.

Solving this puzzle will also help students of international relations to better understand how nations learn to cooperate. Previously, an incremental approach to international cooperation was the norm. The unprecedented cooperation involved in the dismantling of the intermediate range nuclear forces indicated that other avenues were available. The area in which both of the former antagonists had the most visibility, nuclear arms, became an area of great cooperation. Although a treaty is assumed to be a product of

cooperation, the internal structure of the treaty provides the best mechanism for evaluating its effect on signatory cooperation. Earlier arms control treaties have not produced effective implementation organizations. This illustrates that although cooperation was assumed given a signed treaty, cooperation did not expand or take hold. Even though a certain level of cooperation leads to an agreement, this level of cooperation did not sustain itself. The internal structure of the implementation mechanism of a treaty facilitates increased cooperation over time. An analysis of a United States implementation organization, the On-Site Inspection Agency (OSIA), gives us an understanding of those internal factors, ignored until now, which directly affect the level of cooperation of those party to an arms control treaty. The expansion of the OSIA's mission to include several new treaties indicates that some valuable lessons already have been learned.

Naturally, an arms control treaty is not a panacea for developing international cooperation. A treaty may, on the other hand, persuade a state that is surveying the international scene to choose cooperation over conflict, but a signed and ratified treaty does not then guarantee compliance. However, the organization that implements the treaty specifications does play a larger role in the overall level of cooperation than previously considered. Arms control treaties provide a relatively simple, discrete measure of cooperation. If the arms level decreases, the level of cooperation is good. Again, cooperation is not guaranteed, nor does a treaty force rogue states into unwanted and undesired cooperation. However, states which may be surveying the international environment may

be persuaded to cooperate under an arms control regime that is successful rather than choosing a conflictual stance.

The search for a new strategy in the post-Cold War era shows that reality is more complicated in a multi-polar environment. The simpler assumptions that explained the antagonistic situation no longer apply. An attempt must be made to find and develop those structures which may foster overall cooperation. Those states debating whether to cooperate in multilateral arms control regimes should be given an opportunity to cooperate. The area of arms control is a highly visible symbol of the willingness of a state to work with other nations, since this area directly relates to national security issues. As trust and cooperation became more important in a multi-polar world, the treaty verification structure which accompanies arms control agreements also becomes more important. By placing inspections teams in a cooperative environment, beneficial to both signatory national interest and security goals, a level of cooperation and trust may be constructed which cannot be obtained by satellites or open source monitoring. Nations can learn to work together in an area vital to national security, arms control, by working together. Nations can learn by doing if the structure of the organization does not hinder the process. Explaining how cooperation can be fostered through an international arms control organization is the major objective of this thesis.

A distinction must be made early in the classification of arms control organizations. They may be classified as cooperative or enforcement organizations, depending on the nature by which an agreement is obtained. An arms control organization may be created

to enforce certain arms control objectives, for instance the imposition of disarmament on the loser after a conflict. A cooperative organization is usually obtained after international negotiations and domestic approval are arranged. There are prerequisites for both types. Funding is an example. Both types require a reliable budget to conduct operations. Some factors, e.g., the level of dispute resolution mechanisms, are even more important for a cooperative arms control organization. Rogue states are not considered in this cooperative regime. Treaties, and the organizations that implement them, do not guarantee compliance. The structure of organizations designed to implement arms control treaties, however, may influence those states sitting on the fence, deliberating cooperation or conflict. Cooperative arms control organizations may persuade these undecided nations towards cooperation and away from conflict. The effect of such factors on cooperation is discussed within the framework of existing and predicted arms control organizations.

During the Cold War, arms control was an attempt to limit the threat presented to either side. The idea of international relations as a zero-sum game fit into the context of the given state of affairs between the two superpowers. The enormous improvement that took place between the Soviet Union and the United States was highly unusual since cooperation did develop. Nowhere is this more evident than in the Intermediate-Range Nuclear Forces (INF) Treaty. Two former antagonists moved from conflict to cooperation. Many factors assisted the transition. A major factor in the increased level of cooperation was the agreement, as contained in the INF Treaty, to eliminate an entire class of nuclear weapons. By any measure, the

Treaty has been and continues to be an unqualified success. An important task is to examine the treaty and the method of implementation to capture and apply those lessons to discover whether they can be generalized.

The puzzle posed by the INF Treaty is whether internal factors of an arms control organization can solve the problem of building cooperation and if these factors might translate from bilateral to multilateral organizations. The negotiation phase of the treaty is undoubtedly an essential determinant in the future success of the agreement. However, an equally important consideration is the structure of the organization that implements the provisions of the treaty. The optimism that usually attends international treaties on arms control tends to collapse into pessimism if the treaty is perceived as ineffectual or irrelevant. This perception is largely affected by the organization tasked to carry out the treaty. The structure of such an organization is critical to the organization's ability to fulfill its objectives and achieve success. Sustained cooperation, therefore, can be a product and precondition of the organization through the structure of a given treaty.

The brief historical survey of Chapter Two provides initial data for determining variables important for explaining and insuring the success of arms control treaties of today. Looking at treaties with similar external factors, yet having internal factors different (a 'most similar cases' research design) gives insights to the questions to ask arms control organizations of today.

Next, the INF Treaty itself is examined to find out what type of political framework it provided for the United States organization

responsible for its implementation and to sketch the magnitude of the agreement. Third, the On-Site Inspection Agency is examined. The organizational structure is then addressed as it relates to the development of cooperation, the aspect that makes this particular organization interesting. Then, two contemporary organizations are addressed using the same questions put to the On-Site Inspection Agency. In conclusion, an attempt is made to predict the structure of future arms control organizations. Throughout, an effort to relate the success of an organization to its structure unifies the argument. Specifically, the major conclusion of the thesis is that the structure of intrusive verification regimes imbedded within internal treaty mechanisms provides incentive for international cooperation. Cooperation is endogenous to the structure of the organization and can help foster increased cooperation. The interesting point is to discover how antagonists are able to reconstruct their notions of hostility to cooperation, especially in a highly sensitive field such as arms control.

II. HISTORY

To fully understand the historic proportions of the Intermediate-Range Nuclear Forces Treaty between the United States and Russia, a brief history of previous western arms control treaties and their associated implementation mechanisms is essential. A general finding after the review of many arms control treaties is that before the turn of the twentieth century, the method of verification for parties to a treaty was trust. This may be explained by the assumption that the sovereign, as a chosen leader representing God's will, would not cheat on a deal made with another sovereign ruler. This situation was non-problematic since most agreements could be verified, if necessary, prima facie. For example, if a treaty called for the dismantling of a fort, travelers or emissaries could easily see whether the fort still stood. As time and technology advanced, the verification problem increased in complexity. Whereas previous treaties were primarily bilateral, treaties past the 19th century were multilateral. These treaties instigated the international social construction of our current arms control reality.

The following eleven international agreements are presented to illustrate the struggle to craft implementation regimes. As Lily Tomlin said, "If we would listen a little better, maybe history wouldn't have to repeat itself quite so much." The treaties briefly summarized below indicate that success in arms control was a result, at least partially, of the internal mechanisms that resulted from the agreement. Lack of an implementation organization or a poorly

structured implementation mechanism often resulted in failure. The historical review provides the variables that will be used to analyze recent and future arms control organizations; reciprocity, specificity, funding, independence of the organization, degree of policy-making responsibility, and extent of dispute resolution mechanisms.

Treaty of Chaumont, 1 March 1814

Two important treaties during the nineteenth century were the Treaty of Chaumont and the Rush-Bagot Agreement. The Treaty of Chaumont between England, Austria, Russia, and Prussia was the foundation for the Quadruple, then Quintuple, Alliance and was the basis for the Vienna system and the Concert of Europe. Several ingredients of future arms control treaties are found here. The Treaty of Chaumont established an objective, quantifiable force level in Article I, a funding method in Article III, an enhanced ability to obtain 'on-site' information in Article IV, and an ability to make ulterior arrangements without nullifying or abrogating the treaty in Article XII.[1] To improve the level of cooperation, Article VI of the Supplementary Agreement to the Treaty of Chaumont, signed on 20 November 1815, established "Meetings at fixed periods"[2] to continue international dialogue. This treaty was a precursor to the Intermediate-Range Nuclear Forces Treaty. The Treaty of Chaumont contained a measurable indicator of treaty compliance, fixed troop levels. It also recognized and established a funding mechanism. By granting an enhanced diplomatic status to the military commanders on foreign soil, on-site information was readily available to treaty

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[1]*General International Organization: A Source Book,* James T. Watkins, IV and J. William Robinson, [Princeton, NJ, D. Van Nostrand Company, Inc., 1956], p. 4.
[2]Ibid., p. 9.

signatories. A dispute resolution mechanism gave the parties an ability to make minor adjustments without having to renegotiate the entire treaty. Lastly, a standing agreement was made part of the treaty to hold scheduled meetings to improve communication and cooperation in relation to the treaty. Two years later, across the Atlantic, another ground breaking treaty was signed.

The Rush-Bagot Agreement 28-29 April 1817

The Rush-Bagot Agreement was a naval disarmament treaty between the United States and Canada. Each side trusted the other to disarm, or at least reduce the presence of naval ships, to the required number. The treaty was verifiable by inspection as each side was limited to a combined total of 4 armed warships on all the Great Lakes. Each side kept a minimum naval force, but an actual arms reduction did occur. This act of international cooperation engendered further reductions on the Great Lakes.

> It seems certain that the Rush-Bagot agreement, coming soon after a bitter war, had considerable indirect influence on the betterment of relations and the eventual creation of a disarmed frontier.[3]

Success in arms control, in this case disarmament, led to continued cooperation in areas beyond arms control between Canada and the United States. The ability to verify a treaty by inspection is similar to having an 'on-site' capability. If compliance can be easily measured, cooperation is increased within the framework of the treaty. This may then lead to expanded cooperation in other areas as shown by the generally good level of cooperation that exists today

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3*A Documentary History of Arms Control and Disarmament*, eds., Trevor N. Dupuy and Gay M. Hammerman, [New York: R.R Bowker Company, 1973], p. 39.

between the United States and Canada. The next international agreement of significance occurred at the end of the nineteenth century.

The First and Second Hague Conferences

The Final Act of the First Hague Conference, also known as the Peace Conference, was signed on 22 July 1899 "as an authentic record but not as a convention to avoid commitment to all the conventions, declarations, and *voeux*."[4] This set a precedent for the idea of international legality and the force of international treaties on national actors. The three Declarations in the Final Act were arms control specific in that they prohibited balloon-launched projectiles, chemical projectiles, and dum-dum bullets. The Final Act of the Second Hague Conference, signed 18 October 1907, also contained arms control prohibitions in Annexes VII, VIII, and XIV. In both Hague Conferences, these prohibitions were in the form of overt declarations. Neither a verification method nor any type of actual implementation organization was proposed. Although this attempt at arms control failed, it was a step in the right direction since it set a precedent. The conferences also indicated that international norms affected the decision of states at the turn of the 20th century.

Treaty of Versailles 28 June 1919

Among its other monikers, the Treaty of Versailles may be called an arms control treaty. This is evident in Articles 42 and 43 of the Treaty. The Treaty of Versailles explicitly created an active implementation organization to conduct highly intrusive on-site

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[4]*General International Organization: A Source Book*, James T. Watkins, IV and J. William Robinson, [Princeton, NJ, D. Van Nostrand Company, Inc., 1956], p. 25.

inspections within Germany. The goal of this new organization was not cooperation, rather it was enforcement. The significant section of the Treaty is Section IV which explicitly calls for an Inter-Allied Commission of Control to oversee the disarmament process. Germany was not trusted to disarm itself. As a result, Article 205 provided the most comprehensive on-site inspection regime possible. Ultimately, a poorly designed dispute resolution mechanism derailed even the best efforts of the Commission.

The article stated that the Inter-Allied Commission of Control "shall be entitled as often as they think desirable to proceed to any point whatever in German territory, or to send subcommissions, or to authorise(sic) one or more of their members to go, to any such point."[5] This level of intrusive inspection should have contributed to a successful implementation of the treaty's specified reductions. The Inter-Allied Commission of Control had a clear mission according to the Articles and Clauses of the Treaty. Article 205 established a verification mechanism to implement the specified arms reduction contained in earlier Articles and Clauses. This was an important event. The Treaty of Versailles, in an arms control context, displayed the combination of making a decision and elaborating how to execute the decision.

This combination is a necessary condition for successful arms control organizations. The events leading up to the decision, and signature of the treaty, were controlled by several external factors such as personality, conflicts of ideas, and economics. These external

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[5]*A Documentary History of Arms Control and Disarmament*, eds., Trevor N. Dupuy and Gay M. Hammerman, [New York: R.R Bowker Company, 1973] p. 94.

factors were the purview of negotiators. What is of vital interest in the Versailles Treaty is that the final negotiated document merged the variety of external factors into a single agreement and the negotiators had the prescience to include a means, the Inter-Allied Commission of Control, to achieving the desired arms control ends of the Treaty. The anticipated organization as described by the Treaty of Versailles appeared, at the time, ideal. [See figure 2-1]

Great optimism attended the Versailles Treaty and the popular hope was for a disarmed Germany as verified by the three Commissions. Several external factors contributed to the overall failure of the inspection regime. Even assuming that the Inter-Allied Commissions of Control could have achieved all the disarmament and force limitation levels specified in the Versailles Treaty, Germany covertly avoided most of these restrictions through a "secret archipelago of installations"[6] in the Soviet Union and other countries between 1923 and 1933. Within German territory, evasion of the treaty was *de rigeur*. General Hans von Seeckt, head of the postwar Reichswehr, personally resolved to avoid the Commissions of Control in every way.[7] Furthermore, even when presented with evidence of German violation, the Allies ignored the facts to preserve a spirit of international cooperation which would promote the formation of the League of Nations.[8]

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[6]"Archipelago of Deceit: Arms Control and Evasion Between World Wars," Robert T. Dumaine, Air War College, Report #325, April 1978, p. ii.

[7]"Reichswehr," Colonel Robert D. Brown III, US Army War College, 1 May 1986, pp. 2-3.

[8]pp. 47-48, "Archipelago of Deceit: Arms Control and Evasion Between World Wars," Robert T. Dumaine, Air War College, Report #325, April 1978.

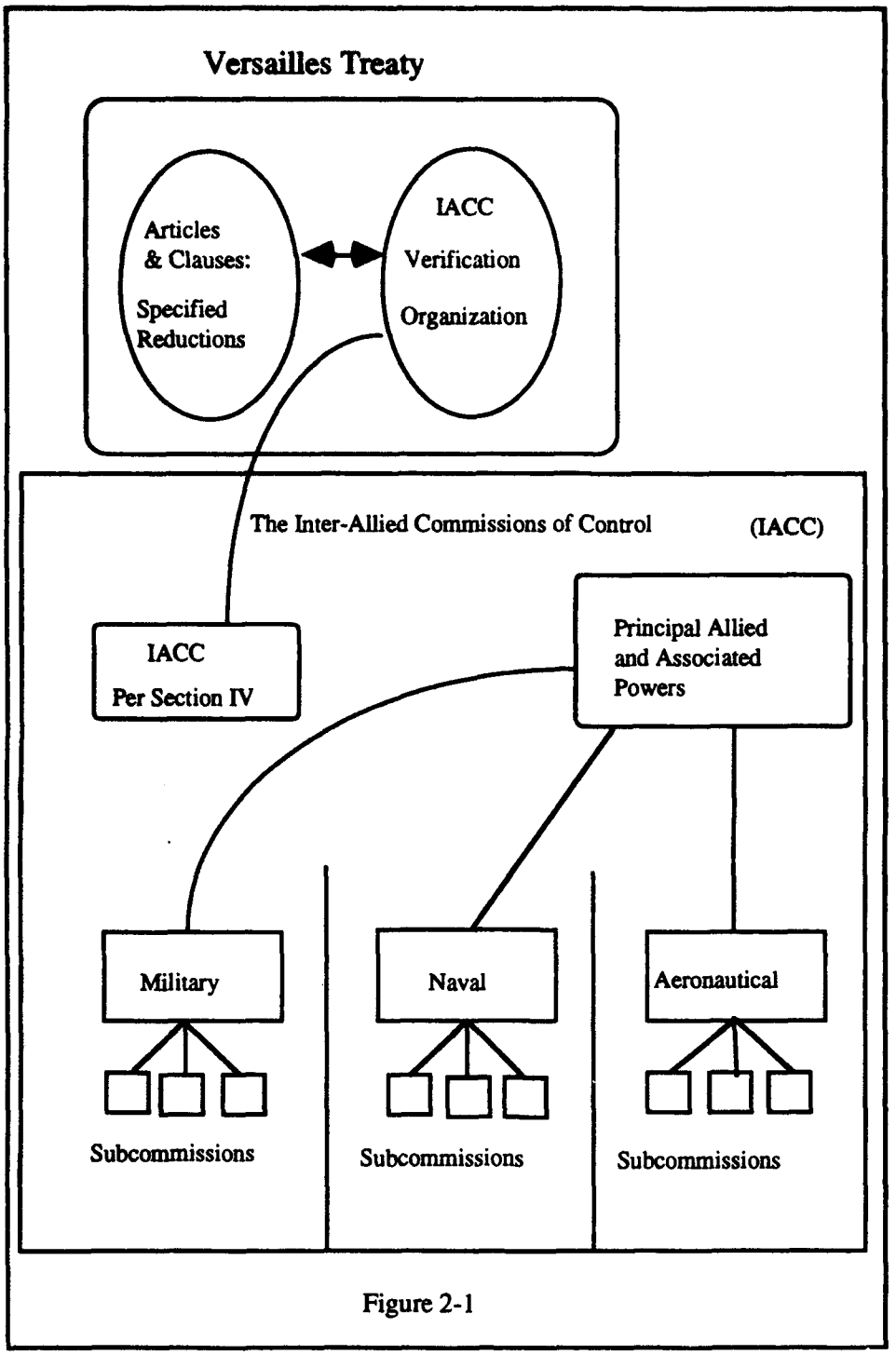
Versailles Treaty
Articles
& Clauses:
Specified
Reductions
IACC
Verification
Organization
The Inter-Allied Commissions of Control
(IACC)
IACC
Per Section IV
Principal Allied
and Associated
Powers
Military
Naval
Aeronautical
Subcommissions
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Figure 2-1

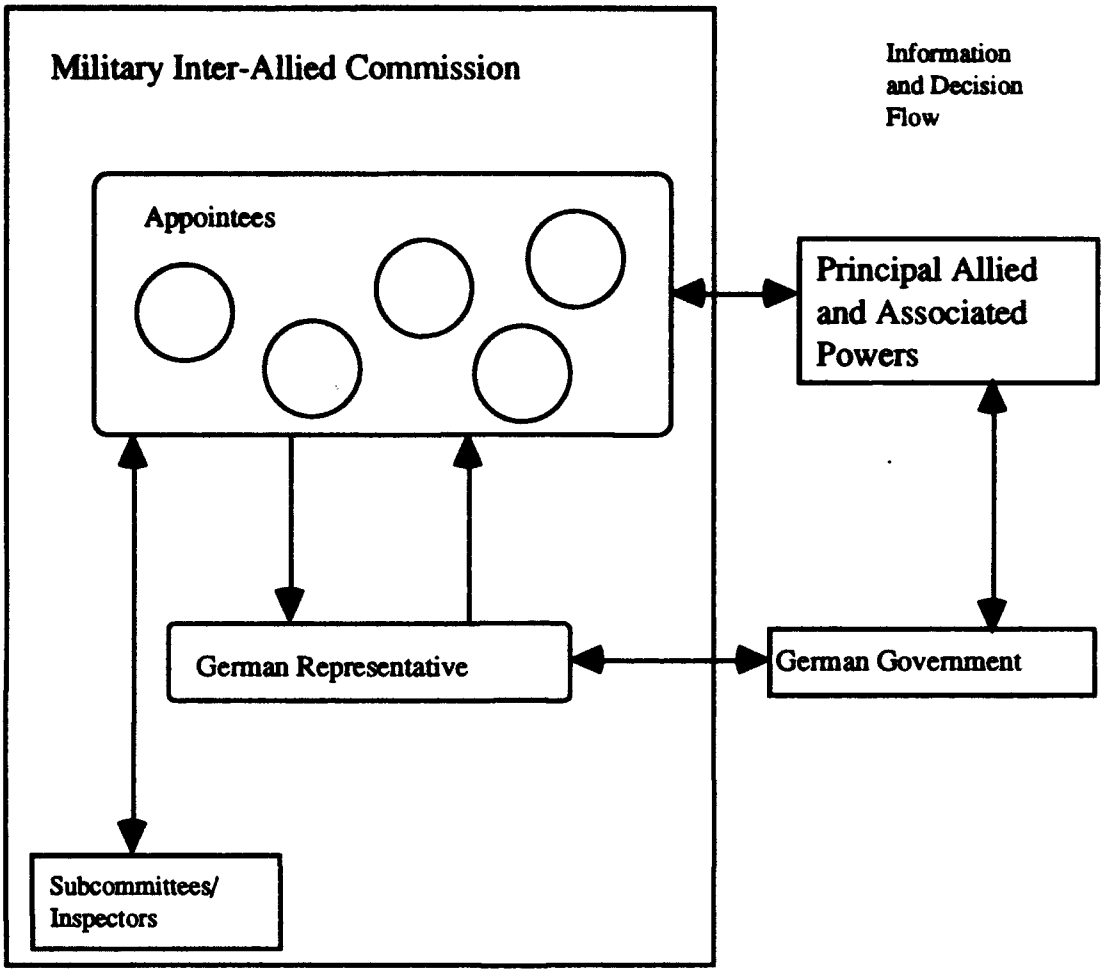

Figure 2-2

Winston Churchill warned against the violations of the Treaty of Versailles by Germany as late as 1935.[9] The Inter-Allied Commissions of Control failed largely because of external factors, but also due to the structure of the Commissions themselves. The enforcement mission of the Inter-Allied Commissions of Control built adversarial relatioships, but it was not the deciding factor of its failure.

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[9], Richard N. Perle, Assistant Secretary of Defense (International Security Policy), SALT II Violations, Senate Hearing, 98th Congress, Second Session, Committee on Appropriations, Special Hearing, Senate Hearing 98-965, U.S. Government Printing Office, Washington, D.C., 1984, p. 9.

The Versailles Treaty is perhaps the most evident example of an arms limitation agreement being worse than having none at all. Given the many factors preventing the Inter-Allied Commissions of Control (IACC) from achieving their objectives, the fact remains that the implementation by the three Commissions was not perfect. This was a direct result of the structure of the IACC as delineated in Article 205. No coordination of effort was designed into the IACC, the three Commissions conducted separate and distinct operations without any sharing of information. Although the duties of the three Commissions were clear, the duties of the Principal and Allied Powers were murky. Other than to request immediate compliance if inspectors detected a violation, no other guidance was available. An informal, ad hoc superstructure attempted to direct a highly formal, centralized verification organization. (See Figure 2-2) This created the most confusion. Obvious cases of noncompliance were lost in the upper echelons of the Principal Allied Powers as they debated the consequences of confronting Germany with the evidence forwarded from the Commissions. No clear line of authority existed to provide information or decisions regarding disposition of detected violations. The Soviets recognized this problem and submitted a Draft Convention for Immediate, Complete, and General Disarmament to the League of Nations on 15 February 1928.[10]

This draft was similar to the disarmament provisions of the Versailles Treaty including the name of the verification organization, the Permanent International Commission of Control. However, the

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[10]*A Documentary History of Arms Control and Disarmament*, eds., Trevor N. Dupuy and Gay M. Hammerman, [New York, R.R Bowker Company, 1973].pp. 152-154.

Soviets introduced a Permanent Commission to oversee and coordinate the specialized Military, Naval, Aeronautical, and Expert Commissions. To settle disputes regarding disarmament, the draft convention also envisaged State-level and local Commissions of Control. Disputes would be handled by the Permanent Commission of Control which would also be the only arbiter. No dispute resolution mechanism was available at a level other than ministerial according to Articles of the Versailles Treaty. The key point is that dispute resolution mechanisms that allow low and early settlement provide greater opportunity for continued cooperation than those that elevate all disputes, no matter how small, to the attention of national leaders. This creates undo tension and causes strain at the lower levels where the inspections take place. The dispute resolution mechanisms must also be integrated into the overall structure. As the Versailles Treaty shows, an inefficient superstructure creates more problems for the implementation organization than it solves.

Another fault was that policy making and policy execution were combined into a single entity, the Inter-Allied Commissions of Control. The Allies did not have a singular common objective after the war and this was reflected in the ambivalence toward the IACC. This failure in policy making led to adverse consequences on the IACC inspectors, such as being attacked, and Germany not providing liaisons.[11] Lastly, the cost of the disarmament process was added to the German war debt. Funding for the IACC was purely made the responsibility of the German government. Although the Allies had

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[11]"On-Site Inspection as an Enhancement to Verification," David L. Brafo.d, Defense Nuclear Agency Report #NPS-56-89-014, August 1989, p. 9.

an interest in having a minimally armed Germany to continue a certain balance of European power, the Allies did not want to finance the disarmament. They would pay in blood for this mistake less than two decades later. Sadly, the Allies would pursue arms control in reverse in the 1930s. The Anglo-German Naval Agreement of 18 June 1935 eliminated much of the German naval limitations imposed by the Versailles Treaty.[12]

Convention for the Control and Trade in Arms and Ammunition 10 September 1919

A Central International Office was established under the Convention for the Control and Trade in Arms and Ammunition on 10 September 1919. Although aimed primarily at restricting trade to Africa and Asia, it contained provisions used today. The lesson here is that the League of Nations did not authorize any means for verification. The control mechanism was the export license. The Central International Office would collect an annual list of export licenses granted by each signatory and further, under Article 5, "full statistical information as to the quantities and destination of all arms and ammunition exported without a licence(sic)."[13] However, the Central International Office had no means, under the convention, to verify the data submitted. The data was assumed to be complete and accurate. The State was required to license people who could own warehouses, but again the Central International Office had no independent verification ability. If one state questioned the

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[12]*A Documentary History of Arms Control and Disarmament*, eds., Trevor N. Dupuy and Gay M. Hammerman, [New York, R.R Bowker Company, 1973] p. 259.
[13]Ibid., p. 97.

licensing policy of another, no internal mechanism for resolution was available. An interesting feature of this Convention was that Article 16 did provide for a maritime 'challenge inspection' to verify the nationality of a suspect vessel.

Convention for the Supervision of the International Trade in Arms and Ammunition and in Implements of War 17 June 1925

The Convention for the Supervision of the International Trade in Arms and Ammunition and in Implements of War restated the 10 September 1919 convention less the Central International Office.

> A significant feature is the significant emphasis on, and detailed provisions for, inspection and publicity as a means of enforcing the convention. In the interwar period...there was increased realization that when national security was at stake, as it was in arms control and disarmament matters, more substantial means of enforcement were needed.[14]

The press essentially replaced the Central International Office in that arms transfer data were to be published. The published data could then be easily compared to the Convention limits to determine compliance. Although a formal implementation organization was not in the Convention, it did provide a dispute resolution mechanism in Article 35 which stipulated that any disagreements over interpretation could be forwarded to the Permanent Court of International Justice.

Resolution XIV 27 September 1922

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[14]Ibid, p. 126.

In addition to worries over the arms trade, the League of Nations attempted to reduce the overall world armament level since the general opinion was that the pre-World War I arms race caused the war. Against the grain of idealistic 'complete and general' disarmament, Resolution XIV of 27 September 1922 established the principle that "national security was prerequisite to a reduction of arms."[15] Furthermore, it recognized that previous consent to arms reductions was the first step towards mutual security guarantees. Mutual security could not be founded upon coercion. Nor could reduction be simultaneous and universal. The Resolution called for arms reductions "by means of partial treaties designed to be extended and open to all countries."[16] Nor would reductions take place as a result of good intentions and rhetoric. Cooperation was increasingly becoming problematic in the arms control field. Resolution XIV also called for the Council of the League to "further formulate and submit to the Governments for their consideration and sovereign decision the plan of machinery"[17] for arms reduction. The League recognized the ability to agree, in principle, to arms reduction is vastly easier than actually going out and doing it. The 'plan of machinery' never emerged. A similar fate awaited the Simon Resolution that the World Disarmament Conference adopted on 23 July 1932. In it, the delegates agreed that "all bombardment from the air should be abolished-once the machinery for carrying out the

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[15]*General International Organization: A Source Book*, James T. Watkins, IV and J. William Robinson, [Princeton, NJ: D. Van Nostrand Company, Inc., 1956] p. 93.

[16]Ibid., p. 93.

[17]Ibid., p. 94.

prohibition had been agreed upon...." [18] This trend of at least acknowledging the utility of an implementation organization was not borrowed in naval treaties.

The Washington Naval Treaty 6 February 1922; and the London Naval Treaty 22 April 1930; London Naval Treaty 25 March 1936.

The Washington Naval Treaty of 1922 was a multilateral treaty that set quite specific limits on size, numbers, and tonnage of warships but provided no verification mechanism.[19] No formal organization supervised the adherence, or lack thereof, by signatories to the specified limitations. This situation was repeated in the London Naval Treaty of 1930; specific limits, no formal means of verification. At the London Naval Treaty conference six years later in 1936, in an atmosphere similar to the current Nonproliferation Treaty Review Conference debate, the 1930 treaty was due to expire and one country, Japan, had given notice of its impending withdrawal. Japan was able to exploit the inclusion of escape clauses in Part IV "under which a nation could ignore the treaty if other nations did, or if it stated formally that its national defense was threatened by adhering to the treaty."[20] No formal organization was proposed or employed for verification or information exchange even though Part III required exchange of information which would be confidential until the disclosing party published it.

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[18] *A Documentary History of Arms Control and Disarmament*, eds., Trevor N. Dupuy and Gay M. Hammerman, [New York, R.R Bowker Company, 1973] p. 192.
[19] Ibid., pp. 107-120.
[20] Ibid., p. 261.

Verification was not a significant consideration in arms control treaties until Versailles. Trust had been non-problematic for signatories. Agreements could, if absolutely necessary, be verified rather easily by tourists or embassy personnel. The sheer volume and variety of arms available after 1900 vastly increased the complexity of verification. The Inter-Allied Commissions of Control were duped and bullied by the Germans, thus dashing any hopes of true disarmament. Since trust was no longer taken for granted, in the interwar years the international community began to see the need for a formal organization that had a responsibility for implementing those agreements contained in international treaties and conventions.

III. DETERMINING THE VARIABLES

External Variables

The reasons for nations to enter into arms control agreements with others are plentiful. However, upon signature and ratification, an assumption that a certain level of cooperation exists, whether coerced or not, is possible. This cooperation is exogenous to the treaty itself. Clearly, some cooperation did take place to get the sides to agree to the treaty. This occurs before the treaty is implemented. The cooperation level spectrum ranges from low in the case of coercion to high in the case of mutual agreement arrived at to achieve a common objective. A treaty indicates that some common level of good will exists at the time of implementation, without making a judgment as to how 'good' the nations consider each other. The first criteria for evaluating an arms control organization is the existence of a signed and ratified treaty to which a state is a party that binds it to prevailing international norms. At present, a state is generally expected to adhere to those treaties and conventions that it signs. In this way, international norms foster the beginnings of cooperation.

Once a state declares in writing an intention to limit or reduce its level of arms, the expectation among other signatories is that the agreement will be honored. Failure to comply results in international opprobrium and the right of the other parties to seek redress in the International Court. Disputes over the treaty may always be resolved in this fashion, whether or not this avenue is explicitly

presented in the particular treaty. The external variables, then, are that good will pre-exists implementation, a binding treaty is in force, and the treaty is a signal for initiating cooperation. These factors have garnered most of the attention. Once a treaty was in force, the cooperation problem was not a factor. The focus was on information and how best to structure verification organizations to provide reliable and accurate information on compliance. Treaty failure was blamed on poor information ability, a lack of being able to inspect anytime, anywhere.

Treaty failure, as the dependent variable of arms control organizations, needs to be redefined as the inability to sustain and build cooperation after a treaty has entered into force. Treaty success, then, is defined as sustained cooperation within a treaty regime. In arms control treaties, a discrete measure of success is available using the number of weapons as an indicator. Treaty success or failure as the dependent variable is affected by factors both externally and internally to a treaty regime. Until now, external factors have been the focus. However, internal factors of treaties also play a significant role which has been overlooked or ignored.

Internal Variables

Factors that tend to ignored when examining arms control organizations are internal. What is of ultimate interest is the success of the treaty. States enter into agreements for mutual gain, for continuing relationships, and for reciprocity. Some benefit accrues to each side in an agreement. If an outcome is possible acting alone, the

agreement is superfluous. States may also want to sustain or formalize existing cooperative arrangements though a formal document. Reciprocity deals with threats to sovereignty. If the agreement is a one-way deal, the threat to sovereignty increases.

An aspect of sovereignty is that it includes the absolute authority of the state to regulate activities within its borders. One of the requirements of regulation is the execution of treaties. "All international agreements impose attendant responsibilities for the state; one of the responsibilities is having an overall regime to verify the treaty."[21] On-site inspection is not a challenge to sovereignty if the state maintains its responsibility for implementing the treaty arrangements. A reciprocal organization escorts and facilitates the inspector organization as a permanent function. A consent to inspect does not mean a loss of sovereignty any more than an individual's consent to search implies a loss of freedom. A permanent organization that reciprocates actions of the inspector organization helps build cooperation by providing an opportunity for 'tit-for-tat' cooperation. Cooperation results from small actions at an inspection site which are then used as a basis for further incremental steps of increasing levels of trust.

The next question is specificity. How specific is the treaty when describing the arms to be limited, destroyed, or counted? This question directly links the treaty to the formal structure of the organization. Specificity describes the bounding and limiting of the treaty on the organization. The easy answer, at a glance, is to

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[21]"Trust, But Verify!" Major General Robert W. Parker, Defense 93, Issue #1, American Forces Information Service, p. 6.

conclude that a universal limit is the most specific. This is a mistake. If the treaty calls for destruction of all tanks, for example, then it would seem trivial to implement. However, in the messy world of politics, this solution creates more problems than it solves. The crux of the problem is defining the arms in a manner agreeable and countable by all signatories. For instance, if a tank is defined as a mobile platform capable of direct fire out to 3000 meters, then some artillery pieces could be counted as tanks. Moreover, the arms control organization and subsequently the treaty are easily discredited by the mere existence of one proscribed piece of armament in a universal limit. Thus, if an effective organization limits or destroys all tanks and one signatory then produces a tank not destroyed, by denying the consequence it has proven the organization to be ineffective. On the other hand, an exhaustively defined universal limit does create an even playing field. As a treaty becomes more narrowly defined, the chances for achieving measurable success increases. Although a counter argument to this is that flexibility is lost, the gain in a clear objective outweighs possible confusion at the inspection site over imprecise or unclear definitions.

Another question relates to funding. An organization cannot survive on good intentions. No set limit of funding is offered, but a reliable source is necessary. Granted, this is a contentious issue. The question of who pays how much is entwined in the domestic and international debate. While access to steady monetary flow does not add extra capability, the absence of reliable funding diminishes an organization's capability. The opportunity for cooperation cannot

develop if the organization is bonded to domestic purses. The cooperation process is interrupted if one of the parties has to wait until money is allocated. The organization needs to be given a goal and the freedom to maneuver to develop cooperation opportunities.

The following series of questions deals with the structure of the verification organization itself. First is the extent of independence given to the organization. Is it subordinate to a larger organization with the attendant problems of its superior, or is it free to specifically concentrate on verification? Second is the question of policy making. Is the responsibility for policy making and implementation combined within the organization, or is this bifurcated to allow the verification agency to implement treaty provisions and another separate agency to concentrate and make decisions regarding policy concerning compliance? The third question concerns the nature, level, and extent of dispute resolution mechanisms. Can disputes over treaty interpretation be solved at the inspector level or must they be raised immediately to the diplomatic ministerial level? Are there provisions to resolve disputes at various levels? Do dispute resolution mechanisms exist within and external to the treaty? What is the flow of disputes? The fourth question is the type of verification employed; open-source, national technical means, or on-site? Does verification rely on a single method? If on-site inspection is used, is this mechanical, e.g., video cameras, or personal, using inspectors? The final question asks whether the organization is differentiated and integrated sufficiently to achieve the treaty goals. The answers to all the above questions,

and they are not all-encompassing, help to evaluate an arms control organization's effectiveness by assessing its structure.

This thesis analyzes the On-Site Inspection Agency first and uses this organization as the model. It then examines the International Atomic Energy Agency using the same questions and compares the results. The specificity, policy making responsibility, and dispute resolution mechanisms distinguish the successful On-Site Inspection Agency from the unsuccessful International Atomic Energy Agency. Two recent arms control organizations are then compared with the model to predict success or failure. The results are more easily represented in tabular form:

	Arms Level Dependent Variable	Reciprocity	Specificity	Funding
OSIA				
IAEA				
UNSCOM				
OPCW				

	Independent	Policy Maker	Dispute Resolution Mechanism
OSIA			
IAEA			
UNSCOM			
OPCW			

IV. THE INF TREATY

The Intermediate-Range Nuclear Forces Treaty contains several lessons that can be generalized for current and future arms control negotiations. I will focus on the implementation organization that was created as a result of this particular treaty and use it as a model. First, a brief history of the treaty itself is useful. A discussion of the unprecedented on-site verification for nuclear weapons follows and the final section examines the Articles of the treaty to highlight the affect of the treaty on the resulting implementation organization.

The Treaty Between the United States of America and the Union of Soviet Socialist Republics on the Elimination of Their Intermediate-Range and Shorter Range Missiles, commonly known as the INF Treaty, set a historic precedent between the two rival superpowers. For the first time, on-site inspection would be allowed within the territories of the signatory states. More significantly, these inspections covered nuclear weapons. The idea of on-site inspections was not new. The subject of on-site inspections had come up since the 1950s.[22] In the debate on the Peaceful Nuclear Explosions Treaty, Richard Perle said, "I think the principle of on-site monitoring indeed is a very useful one to establish."[23] Senator Charles Percy, the Committee Chairman, agreed. The social reality of

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[22]pp. 255-257, Tom Geravasi, The Myth of Soviet Military Supremacy, Harper and Row Publishers, New York, 1986.

[23]p. 19, "International Security Policy", Hearing before the Committee on Foreign Relations, United States Senate, Ninety-Seventh Congress, First Session, 27 July 1981, U.S. GPO, Washington D.C., 1981.

on-site inspection had been under construction for awhile, but the INF Treaty was the capstone.

The general international environment shifted its concentration to the strategic intercontinental ballistic missiles in the 1980s. At a Canadian arms control conference in February 1982, the consensus was "that it was essential to commence strategic arms limitation negotiations"[24] because the dual-track option of the US jeopardized the fledgling INF negotiations. On 23 November 1983, the first Pershing II missiles arrived in Europe and the Soviets walked out of the INF negotiations.[25] NATO and the US abided by the deployment policy and the Soviets ultimately returned to negotiate INF.

Maynard W. Glitman, Chief Negotiator for INF, said that one of the major obstacles to concluding the Treaty was "to ensure that we [the US] really did get effective verification."[26] Three generally accepted goals of arms control verification are:

1) detect violations
2) deter noncompliance
3) build confidence

INF provisions were questioned in a Congressional Research Service Report in early 1988. The report pointed out the concerns over detection ability by the US since the INF Treaty does not provide an 'anywhere, anytime' approach to inspections. Nor does the INF Treaty

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[24]p. 15, *Arms Limitations and the United Nations*, eds. R. B. Byers and Stanley C. M. Ing, Toronto: Canadian Institute of Strategic Studies, 1982.
[25]p. CRS-12, Michael N. Zarin, "Intermediate-Range Nuclear Forces Treaty: Chronology, Major Provisions, and Glossary of Key Terms," CRS Report to Congress, Report #88-44F, 14 January 1988.
[26]p. 13, *Understanding the INF Treaty*, US Arms Control and Disarmament Agency, Washington, D.C., 1988.

include any penalties or sanctions for violations.[27] The accusation was that the INF Treaty did not meet any of the three goals for verification. In practice, INF accomplished all three. Later in the report, the authors indicate that the "fact that the Treaty eliminates an entire class of weapons...and provides intrusive verification measures are cited by some as factors that make future agreements more likely."[28] Although INF involved less than 5% of the total nuclear stockpile, "the real value of an INF Treaty relates to the kind of superpower relationship it can engender-including chances of achieving reductions in the more numerous strategic weapons-and less to its specific mandates."[29]

In the mid-1980s, Tom Geravasi claimed on-site inspection to be unnecessary since, using national technical means, "at each site, we can already see more than any inspector could, and whatever we cannot see, neither could he."[30] This claim ignores the possibility of cooperation generated by personal on-site inspections. On-site inspection is not just a question of information but also of cooperation, of building social relations. Cooperation is a habit that builds slack into agreements which then makes accommodations easier to make by both sides.

The history of the negotiating process is beyond the scope of this paper, but President Reagan recognized the potential for arms

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[27]p. CRS-xi, "Assessing the INF Treaty," CRS Report to Congress, Steven R. Bowman et. al., Report #88-211F, 16 March 1988.
[28]p. CRS-xii, "Assessing the INF Treaty," CRS Report to Congress, Steven R. Bowman et. al., Report #88-211F, 16 March 1988.
[29]p. CRS-66, "Assessing the INF Treaty," CRS Report to Congress, Steven R. Bowman et. al., Report #88-211F, 16 March 1988.
[30]p. 254, Tom Geravasi, The Myth of Soviet Military Supremacy, Harper and Row Publishers, New York, 1986.

control as a possible path to increased cooperation during the 1985 Geneva summit when he presented a comprehensive plan for arms control to General Secretary Gorbachev which "called for verification measures to promote confidence in compliance"[31] with agreements. Even though the United States recognized the need for an implementation organization before the treaty was signed, the genesis of the organization occurred after the INF Treaty was nearly complete.[32]

The organization created to fulfill the terms of the INF Treaty for the United States is the On-Site Inspection Agency. The On-Site Inspection Agency (OSIA) is a classic case of form following function. The function of OSIA is plainly spelled out in the basic INF Treaty document which contains the goals of the new implementation organization. Before OSIA is studied, the INF Treaty itself must be highlighted. Measuring effectiveness of the OSIA is a simplified task as a direct result of the INF Treaty. The dependent variable is the level of cooperation involved in the implementation of the treaty as measured by an increase or decrease in the level of arms. If INF missiles decrease to zero, cooperation is good. Therefore, the Treaty is a success and so is the implementation organization. More importantly, the INF Treaty provides a framework upon which to construct an effective arms control organization. The language of the INF Treaty specifies what must be done, but not how. This is the

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[31]p. 291, *Soviet Diplomacy and Negotiating Behavior, 1979-1988: New Tests for U.S. Diplomacy,* Volume II, Congressional Research Service, August 1988.
[32]p. 14, *On-Site Inspections Under The INF Treaty: A History of the On-Site Inspection Agency and INF Treaty Implementation, 1988-1991*, Joseph P. Harahan, Washington, D.C.: US Government Printing Office, 1993.

task for the organization itself. A brief look at the treaty indicates a sturdy skeleton that was then fleshed out by OSIA.

The Preamble designates the parties to the treaty as the United States and the Soviet Union. It also links the INF Treaty to obligations of the nuclear states under Article VI of the Nonproliferation Treaty to make efforts toward nuclear arms reductions. Article I gives the broad objectives and basic obligations of each side to eliminate all short-range and intermediate-range nuclear missiles and each side further promises not to have any such systems after all have been eliminated. Article II gives precise definitions of terms used in the treaty. The fifteen terms include ballistic missile, ground-launched ballistic missile (GLBM), cruise missile, ground-launched cruise missile (GLCM), intermediate-range missile, and shorter-range missile. An example of the specific nature of the definitions is the term 'intermediate-range' missile. The Article II, paragraph 5 definition reads:

> The term "intermediate-range missile" means a GLBM or a GLCM having a range capability in excess of 1000 kilometers but not in excess of 5500 kilometers.[33]

Article III specifies the exact types of existing missiles, e.g., SS-20, as defined by Article II. In this way the universal limit of zero intermediate and shorter-range missiles is directly linked to existing missiles in each inventory. The exact nomenclature for each missile is also stated, e.g., SS-20. Article IV explicitly defines, in two phases, the time frame for elimination of all intermediate-range missiles.

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[33]p. 68, *Senate Treaty Documents, Nos. 11-22*, United States Congressional Serial Set, Serial #13857, United States Government Printing Office, Washington, 1990.

The first phase was to last no longer than 29 months and the second phase ended not later than three years after entry into force of the INF Treaty. Article V covers the shorter-range missiles and required their elimination within 18 months after entry into force. A requirement to have all shorter-range missiles retained in elimination facilities within 90 days is also specified in this article. Article VI prohibits production of new INF missiles and precludes any flight testing. Paragraph 2 does allow production and testing of strategic ballistic missiles, given that they do not have stages interchangeable with intermediate-range missiles proscribed by this treaty.

Article VII contains the counting rules that are crucial to verification. Again, precise definitions are given to establish exactly the different types of missiles to be counted or not counted. An example of what not to count, in this case anti-ballistic missiles, is given in paragraph 3:

> If a GLBM is of a type developed and tested solely to intercept and counter objects not located on the surface of the earth, it shall not be considered to be a missile to which the limitations of this treaty apply.[34]

Article VIII places locational and transit restrictions on both sides to enhance the verification ability during the elimination period. It specifies where and when the missiles must be a the beginning of the inspection period and prohibits exceptions to the

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[34]p. 71, *Senate Treaty Documents, Nos. 11-22*, United States Congressional Serial Set, Serial #13857, United States Government Printing Office, Washington, 1990.

Memorandum of Understanding that provides exact coordinates of where all the missiles are to be located.

Article IX explains when and what kinds of data exchanges and notifications must occur. This information must be sent through the Nuclear Risk Reduction Centers established in 1987. Each side is required to update data regularly; within 48 hours after every elimination and at six-month intervals.

Article X establishes the elimination regime, the heart of the matter. It specifies the elimination of the missiles and specifically mandates the means of verification as on-site. A Protocol on Inspection and a Protocol on Elimination, integral documents of the overall INF Treaty, are referenced here and further expand the specific nature of the agreement. A ceiling of 100 eliminations by launching is also emplaced.

Article XI explicitly articulates a 'right' to on-site inspection under the INF Treaty. Paragraph 2 expands the right of on-site inspection to the territories of the basing countries giving this bilateral treaty a multilateral context. Article XI also describes the various kinds of on-site inspections such as baseline, close-out, and monitoring.

Article XII recognizes the existence and utility of national technical means to supplement verification. A surprising aspect of this article is that each side agrees not to interfere with the other side's national technical mean of verification using concealment measures. Moreover, each side agreed to cooperative measures such as opening roofs of structures upon request to assist verification by national technical means.

Article XIII is a watershed section. This section establishes the Special Verification Commission to help resolve disputes over treaty interpretation and gives this new commission authority to make technical changes which do not affect the basic agreement. Previously, any changes to a treaty had to be renegotiated. Furthermore, any disputes resulting form treaty interpretations quickly rose to the ministerial level. The Special Verification Commission was created as a buffer in between the implementation organization and the higher policy makers at the state level. This intermediate dispute resolution mechanism provides a warning to higher levels that a significant problem is surfacing and allows adequate time to develop a solution. Nonetheless, a clear line of authority is established and the dispute is not allowed to stagnate in the Special Verification Commission. Thus, to fix a minor unforeseen problem an amendment process is unnecessary. If an amendment is needed, this mechanism is provided in Article XVI.

Article XIV states that each side will not enter into any treaty that conflicts with the INF Treaty. Article XV declares the treaty to be unlimited in duration, thereby forswearing INF missiles forever. Article XV also gives each party the right to withdraw in extraordinary circumstances provided a six-month notification is submitted. Article XVII covers entry into force, registration and identifies the signing date as 8 December 1987.

All the agreements and protocols are instrumental for cooperation between the US and Russia, the successor to the Soviet Union in the particular case of the INF Treaty. Detractors of the Treaty claim that since INF is primarily a bilateral agreement, few lessons are

transferable to an international setting. However, the INF Treaty includes the Basing Country Agreements that permit the on-site inspection procedures to be conducted on sovereign territory other than the US and Russia. Missiles and warheads covered by the INF Treaty that were based in a Warsaw Pact or NATO country were permitted to be inspected on the sovereign territory where they were located. The Basing Country Agreements were signed by the Kingdom of Belgium, the Federal Republic of Germany, the Republic of Italy, the Kingdom of the Netherlands, and the United Kingdom of Great Britain and Northern Ireland with the United States. Diplomatic notes were exchanged between the United States and the German Democratic Republic and Czechoslovakia regarding inspections in those two, at that time, sovereign countries. Technically, the INF Treaty is a bilateral agreement between Russia and the US. However, an international cooperative effort regarding on-site inspections on sovereign territory was necessary before implementation could begin. This brief examination of the INF Treaty indicates that the purpose of the Treaty was clear. Having signed and ratified INF, each party knew what was expected and the hard task of how to accomplish the bold task of eliminating an entire class of nuclear weapons began.

V. ORGANIZATION THEORY AND OSIA

An examination of the OSIA requires a familiarization with some organization theory. This chapter explains the organizational terms, defines how the organization is structured, and describes the impact of structure on cooperation. Organizations achieve goals that are beyond the reach of individuals. "But to focus on what organizations *do* may conceal from us the more basic and far reaching effects that occur because organizations are the *mechanisms* -the media-by which those goals are pursued."[35] [Italics in original] Organizations, then, are not merely tools, they are also actors in their own right. Observing how a particular organization interacts with its environment may help broaden our understanding of its affect on other actors and how cooperation can be built.

The internal structure of an organization consists of five elements. The elements of an organization are its social structure, goals, technology, and participants.[36] The environment must also be considered as the fifth element since the organization is interdependent with the environment.

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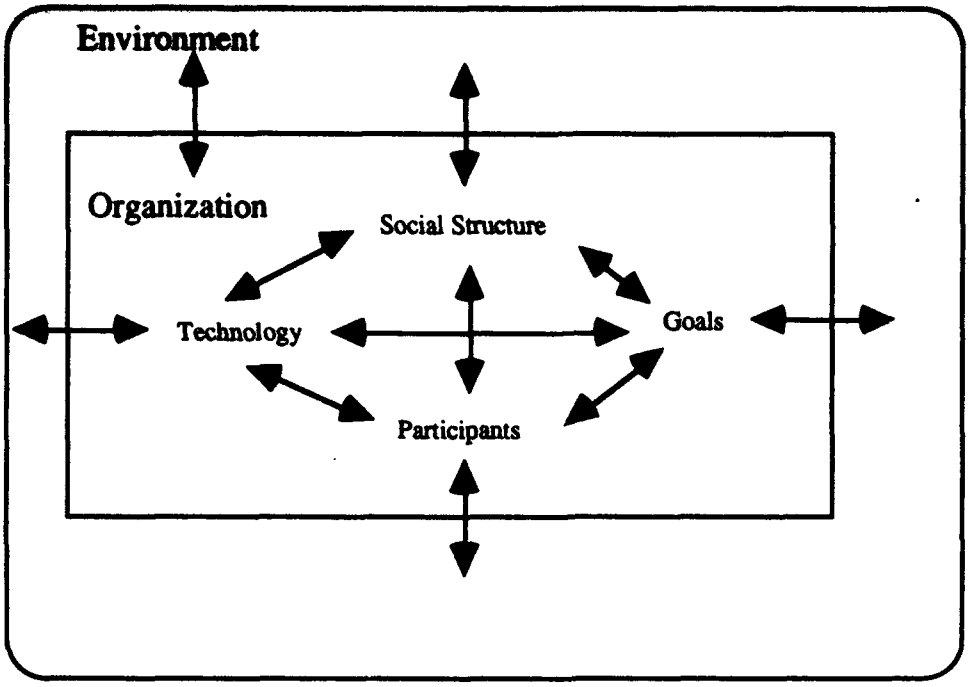
[35]p. 6, W. Richard Scott, Organizations: Rational, Natural, and Open Systems, Prentice-Hall, Inc., Englewood Cliffs, NJ, 1981.

[36]p. 13, figure 1-1, W. Richard Scott, Organizations: Rational, Natural, and Open Systems, Prentice-Hall, Inc., Englewood Cliffs, NJ, 1981.



All five components are necessary for an organization to exist. The organization as a whole interacts with and is acted upon by its environment. It is not an entity unto itself. Moreover, when the focus is on cooperation, the key element is social structure. Social structure is the patterned or regularized aspects of relationships existing among participants in an organization and those relationships existing between the organization and the environment. An emphasis is on social structure in this case because the on-site inspectors interact not just with members within OSIA, but also with members of another organization on a regular basis. W. Richard Scott identifies the two interrelated components that comprise the social structure as normative and behavioral.[37]

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[37]pp. 14-15, W. Richard Scott, Organizations: Rational, Natural, and Open Systems, Prentice-Hall, Inc., Englewood Cliffs, NJ, 1981.

The INF Treaty establishes the values and norms of the OSIA and, to an extent, helps define roles and behavioral structure. The goal, selected by the Treaty and implemented by OSIA, is the elimination of all INF missiles. The norms are explicated in the Articles and Protocols. For example, part VI of the Inspection Protocol gives the general rules for conducting inspections. Roles are defined by referring to the Inspection Protocol and by the relationship of the individual to others within the organizational hierarchy. Behavioral activity is also partially delimited according to the INF Treaty such as the time frames and intervals of the on-site baseline inspections. The full behavioral structure is discovered by analyzing the actual conduct of the OSIA during the myriad of on-site inspections. In so doing, the social structure of the OSIA and its affect on the larger environmental social system may be obtained. One vital lesson of the INF Treaty and the OSIA is that "social structure does not connote social harmony."[38] Despite internationally approved memorandums, protocols, and agreements, cooperation is not guaranteed. Conflict results from the structure of relationships between individuals and groups and is not necessarily an innate aggressive individual characteristic. While informal structures do play a role, for OSIA a formal structure will be addressed, "one in which the social positions and the relationships among them have been explicitly specified and are defined independently of the personal characteristics of the participants occupying these

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[38]p. 15, W. Richard Scott, Organizations: Rational, Natural, and Open Systems, Prentice-Hall, Inc., Englewood Cliffs, NJ, 1981.

positions."[39] This provides an opportunity to address the relationships of the organization with the environment independent of personality calculations. These, again, are important, but the focus here is on the overall interaction of the organization with the environment.

Second in importance is technology. Technology is that which is applied for processing an input, e.g., information from an on-site inspection, into an output, e.g., objective data regarding treaty compliance. Technology comprises a participant's skills and knowledge, machines, and mechanical equipment. OSIA demonstrated that 'low technology' did not equate to low effectiveness. Specifically, the inspection teams carried tape measures, flashlights, Polaroid cameras, and other mundane mechanical equipment for verification. Furthermore, negotiation is a technology at the inspector level since it is part of the skil and knowledge the inspectors bring to the organization. This aspect provides a unique insight into the interrelation of the characteristics of technology and the structural features of the organization. OSIA's goals, its conception of desired ends, were provided in the INF Treaty and embodied in its charter.[40]

To evaluate arms control organizations according to their structures, a generic model is needed. The open rational systems model explains differences among organizations in their formal structures. The unit of analysis is the organization itself, not individual participants or subgroups within it. The dependent

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[39]p. 15, W. Richard Scott, Organizations: Rational, Natural, and Open Systems, Prentice-Hall, Inc., Englewood Cliffs, NJ, 1981.
[40]p. 4, *On-Site Inspections Under the INF Treaty,* Harahan.

variable is the formal structure, which the model attempts to explain and measure.[41] The quickest, albeit limited, way to grasp the structure of an organization is through the organization chart. "Despite obvious shortcomings, the organization chart remains an important mechanic in formalization. It provides a good shorthand picture of basic formal relationships."[42] The chart helps depict the organization against its environment and the relationships among its subgroups while always bearing in mind that "(b)ecause organizations are complicated social organisms, they must be viewed in their total, multi-dimensional context, rather than from a narrow, mechanical point of view."[43]

The organization chart will illuminate much, but it does not always reflect the dichotomy of policy and administration. "Weber suggested a rough kind of separation of policy and administration, in which the idea of professional management is emphasized."[44] The organization may attempt to both make and implement policy. This situation may be described by saying that policy is the *formulation* of goals and administration involves their *execution*."[45] [Italics in original] This policy-administration dichotomy is what I call a bifurcation of responsibility. A tight coupling of policy and implementation impinges on the organization's freedom of action. If

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[41]p. 130, W. Richard Scott, Organizations: Rational, Natural, and Open Systems, Prentice-Hall, Inc., Englewood Cliffs, NJ, 1981.

[42]p. 223, John M. Pfiffner and Frank P. Sherwood, Administrative Organization, Prentice-Hall, Inc., Englewood Cliffs, NJ, 1960.

[43]p. 15, John M. Pfiffner and Frank P. Sherwood, Administrative Organization, Prentice-Hall, Inc., Englewood Cliffs, NJ, 1960.

[44]p. 58, John M. Pfiffner and Frank P. Sherwood, Administrative Organization, Prentice-Hall, Inc., Englewood Cliffs, NJ, 1960.

[45]p. 82, John M. Pfiffner and Frank P. Sherwood, Administrative Organization, Prentice-Hall, Inc., Englewood Cliffs, NJ, 1960.

the coupling is too tight, everything becomes politicized since all implementation actions are concurrently policy actions. Does the organization implement policy, make policy, or does it try to do both?

The structure of the organization gives answers to these questions. Structure also affects cooperation if structure is defined as a *stable set of relationships.*[46] The stable set of relationships is slowly established over time as organizations interact. Organizations do become actors in their own right, but interaction with the environment occurs through human interface. The more an organization is structured to provide person to person interaction, particularly with participants of other organizations, the greater the chance for interaction and the development of stable relationships. Thus creating more structure which then feeds back into more interaction and increased structure, or more stable sets of relationships. This is how structure evolves and stable relations develop. The challenge in arms control organizations lies in the internal structure of the organization to prevent a tight coupling through bifurcation of responsibility.

The lesson of OSIA is,"...as Lilienthal suggests, there are occasions when the *way* in which a task is being undertaken may be of greater significance than the end being pursued."[47] The simultaneous infusion of inspector teams into the Soviet Union and into the United States created a large volume of personal interaction that dealt with a vital national security issue for each side. The

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[46]p. 296, John M. Pfiffner and Frank P. Sherwood, Administrative Organization, Prentice-Hall, Inc., Englewood Cliffs, NJ, 1960.

[47]p. 83, John M. Pfiffner and Frank P. Sherwood, Administrative Organization, Prentice-Hall, Inc., Englewood Cliffs, NJ, 1960.

elimination of INF missiles continued to be significant, but the building of cooperation between the former antagonists through the on-site inspection teams increased in importance. The way in which the inspections were conducted resulted in continued cooperation as indicated by the full elimination of all INF missiles within the treaty period.

Concurrent with the idea of structure is the idea of an organization as "a system of relations between people."[48] And not just relations within the organization, but external as well. "The way to look at organizations is to observe how people behave with one another on the job....In short,...study *interactions*.[49] [Italics in original] These interactions define the level of cooperation between organizations which may then translate beyond the bounds of the organization into the larger environment.

The interactions not only affect structure, they affect how the social reality is constructed.

> The necessity for making daily decisions creates a system of precedents. Precedents tend to become habitual responses to situations for which they are defined as relevant and thus to reinforce the internalization of subunit goals.[50]

This internalization of goals becomes a damper on organizational dysfunction.[51] Another damper is operationality of goals which is

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[48]p. 269, John M. Pfiffner and Frank P. Sherwood, Administrative Organization, Prentice-Hall, Inc., Englewood Cliffs, NJ, 1960.

[49]p. 269, John M. Pfiffner and Frank P. Sherwood, Administrative Organization, Prentice-Hall, Inc., Englewood Cliffs, NJ, 1960.

[50]pp. 36-37, James G. March and H. A. Simon, "The Dysfunctions of Bureaucracy," Organization Theory, ed. D.S. Pugh, Penguin Books, Baltimore, MD, 1973.

[51]p. 37, James G. March and H. A. Simon, "The Dysfunctions of Bureaucracy," Organization Theory, ed. D.S. Pugh, Penguin Books, Baltimore, MD, 1973.

defined as "the extent to which it is possible to observe and test how well goals are being achieved."[52] Both of these dampers are at work in OSIA.

The on-site team leaders for the OSIA have the authority to make decisions at the inspection site according to the INF Treaty provisions. As issues are resolved at the site, precedents are established. The key precedent is the perception that action is possible and results are immediate. This translates to other teams and into the entire organization. As a result, subunit goals of mission accomplishment are reinforced and internalized. An opportunity for 'tit-for-tat' cooperation is available at the point of decision, both at declared sites and at the monitoring facilities. This builds a reservoir of shared experiences that reinforce future decisions to continue or increase cooperation.

Whereas information was considered the central problem of verification, measures that build confidence in compliance which then foster further cooperation now play a larger role. On-site inspection is one such measure, although it is clearly not a panacea. But within its limitations, on-site inspection can make a contribution to arms control and to overall cooperation. As Major General Roland Lajoie, the first Director of the On-Site Inspection agency said:

> On-site inspection has limits; we can go to specific sites in search of specific information and return with more confidence than before concerning compliance at that particular site....So it gives us more confidence, but under restrictive circumstances. Nonetheless, I think that in itself is very useful. On-site

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[52]p. 37, James G. March and H. A. Simon, "The Dysfunctions of Bureaucracy," Organization Theory, ed. D.S. Pugh, Penguin Books, Baltimore, MD, 1973.

inspection under the INF Treaty has given the U.S. government increased confidence. We now have more knowledge about Soviet forces, and with that knowledge comes perhaps somewhat better understanding and maybe eventually more predictability in our relationship.[53]

[53]p. 10, "Insights of an On-Site Inspector," Interview of Brigadier General Roland Lajoie, Arms Control Today, November 1988.

VI. ANALYSIS OF OSIA

The On-Site Inspection Agency (OSIA) was designed to accomplish the goals specified in the INF Treaty. "When the treaty was signed, the United States had no formal mechanism to perform on-site inspections. However, within six weeks of treaty signature, Reagan directed the formation of the On-Site Inspection Agency within the Department of Defense."[54] The arms level of medium and short-range missiles decreased to zero in May 1991 in accordance with the target set by the treaty.[55] This is a direct result of the structure of the organization itself. [See Figure 6-1]

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[54]p. 7, "Trust, But Verify!" Major General Robert W. Parker, Defense 93, Issue #1, American Forces Information Service.

[55]p. 106 & 112, *On-Site Inspections Under the INF Treaty*, Joseph P. Harahan, United Sates Department of Defense, Washington, D.C., 1993.

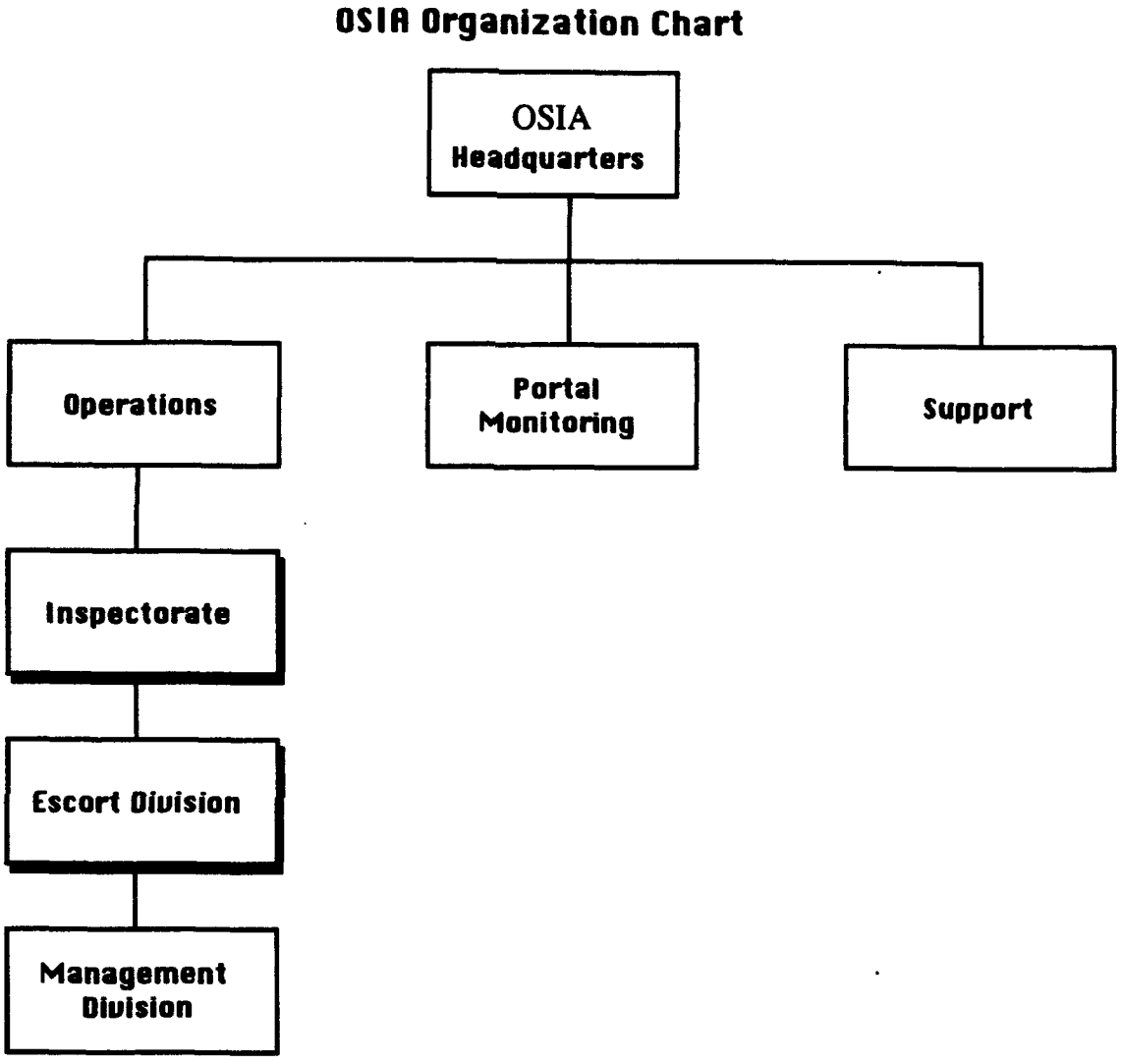

Figure 6-1

OSIA was designed to inspect and to reciprocate inspections by the USSR as evidenced in the organizational structure. The operations division has an inspectorate division and an escort division. Reciprocity ensured that the side being inspected had representation during the inspection and reiterated the notion of the inspected states sovereign responsibility for treaty implementation. This

division of labor created an integration problem, but it allowed a greater number of inspections to take place simultaneously. OSIA's mission of reducing both arsenals to zero assisted the organization in maintaining a high level of integration. Reciprocity raises an issue over spying. If an inspector also performs a role of a guide, the concern is whether this person will 'beat the system' since he or she understands the intricacies of the inspection rules.

This challenge is met through specific language embedded in the treaty. As specificity increases, the avenues of evasion decrease. Although in Article I of the INF Treaty each Party agrees to "eliminate its intermediate-range and shorter-range missiles, not have such systems thereafter, and carry out the other obligations set forth in this Treaty,"[56] the high-sounding language is brought to earth in the subsequent articles and becomes very technical and specific. The INF Treaty indicates that both sides understood that more than an agreement to eliminate these systems was necessary. An ability to conduct the reductions, a how-to, was equally important to the decision to do it. The specific language of the treaty helped the OSIA structure itself to meet the demands of the treaty. By outlining what to do, the INF Treaty became a firm foundation of how to get the mission completed.

The third question to be answered is funding. OSIA falls under the Department of Defense and receives a generous operating budget. The funding has not been problematic since the Agency fulfills its

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[56]p. 67, The Treaty Between the United States of America and the Union of Soviet Socialist Republics on the Elimination of Their Intermediate-Range and Shorter Range Missiles, *Senate Treaty Documents, Numbers 11-22*, US Government Printing Office, Washington, D.C., 1990.

purpose. This efficiency reinforces its usefulness and fosters positive appraisal which then loops back into the evaluation model. OSIA is seen to accomplish its mission in the allocation segment, OSIA has clear standards to meet and this makes efficiency tests appropriate, and all sampling indicators are applicable; outcome-INF missiles = 0, process-193 elimination teams conducted 600 inspections and escorts over three years, structural-OSIA highly formalized.[57] The important point is that OSIA has a steady budget and therefor has an ability to act when necessary.

OSIA's efficiency affects its survival as well since the efficiency feeds back into the elaboration of the rationalized myths other organizations and those in Congress hold. This develops and sustains OSIA's conformity with the institutional myth regarding its ability and leads to continuing legitimacy and resources. Thus, OSIA's survival is assured.

Verification was accomplished under the INF Treaty through intrusive on-site inspections. On-site inspections were, once again, a historic departure in the field of nuclear arms control. The physical presence of inspection teams made it possible to achieve a grass-roots level of cooperation. National technical means were still part of the inspection regime, but on-site inspection was the central means of verification.

Despite being subordinated to the Department of Defense, OSIA retains a status as an independent agency. The mission of OSIA was solely the implementation of the INF Treaty although now its mission

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[57]p. 114, *On-Site Inspections Under the INF Treaty*, Joseph P. Harahan, United Sates Department of Defense, Washington, D.C., 1993.

has expanded to include START I and START II, the Comprehensive Test Ban Treaty, Conventional Forces in Europe Treaty, Threshold Test Ban Treaty, the Open Skies Treaty, and soon the Chemical Weapons Convention. The mission now is to conduct on-site inspections according to the associated treaties. Most importantly, OSIA remains an independent agency.

A significant factor in the success of OSIA is that it was and continues to be an implementation organization. "On-site inspection is only one means through which the United States verifies the declarations and actions of a treaty partner. *Agency personnel monitor, observe, and report.*"[58] [Emphasis added] The US policy community makes compliance judgments. Responsibility for policy making and implementation is bifurcated. OSIA "operates under the Department of Defense, but major policy decisions come from an interagency group that is under the National Security Council. This arrangement, although appearing somewhat unwieldy, has the executive side of government determining policy (their central responsibility), and the operational element of the Defense Department executing the practical aspects of the Treaty."[59] Policy making is not at all part of OSIA's mission. [See Figure 6-2]

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[58]p. 8, "Trust, But Verify!" Major General Robert W. Parker, Defense 93, Issue #1, American Forces Information Service.

[59]p. 21, Lieutenant Colonel Bruce F. Bach, "Implementing A Conventional Forces Europe (CFE) Treaty: Will NATO Be Ready?" US Army War College, 15 June 1990.

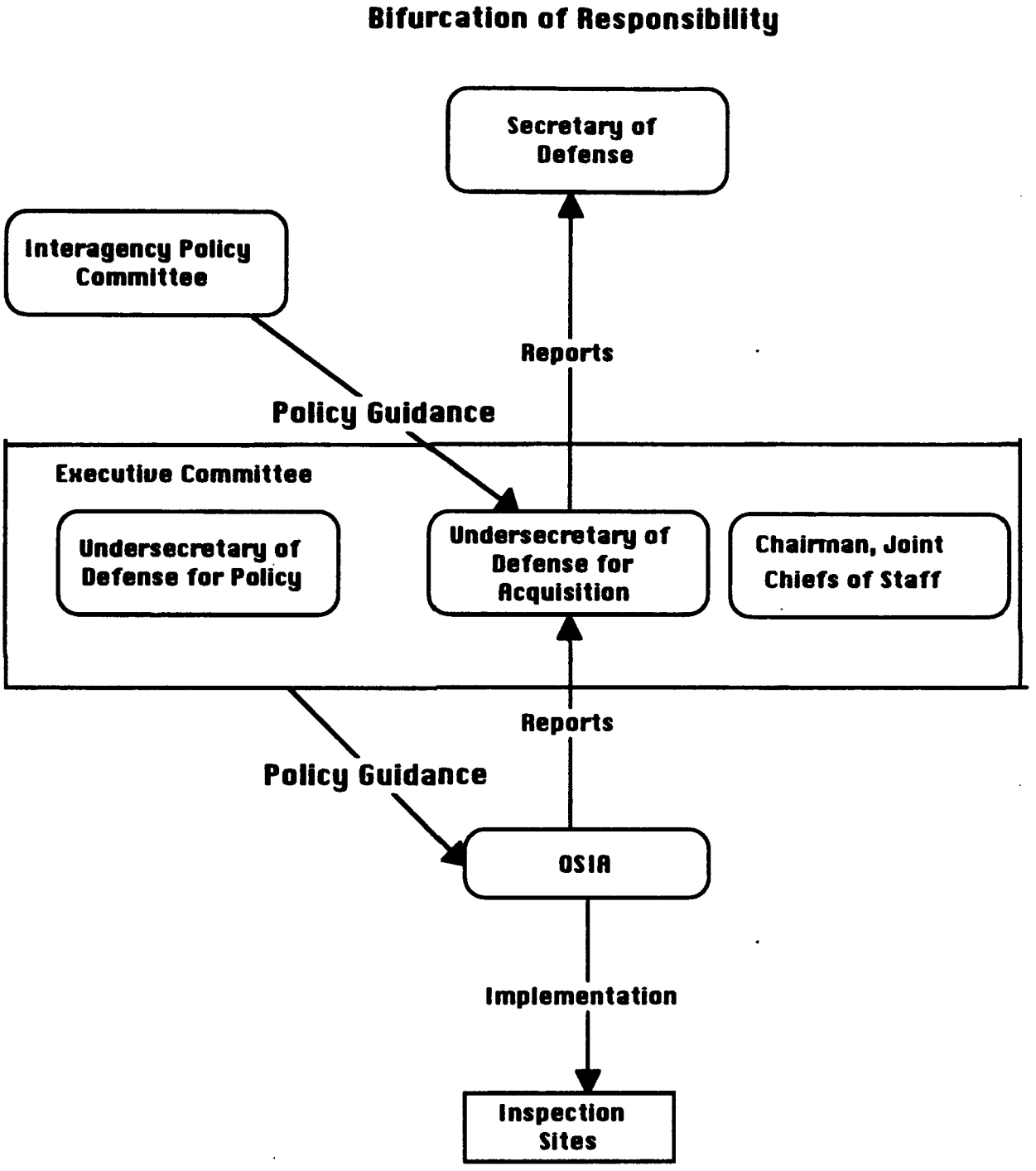
Bifurcation of Responsibility
Secretary of Defense
Interagency Policy Committee
Reports
Policy Guidance
Executive Committee
Undersecretary of Defense for Policy
Undersecretary of Defense for Acquisition
Chairman, Joint Chiefs of Staff
Reports
Policy Guidance
OSIA
Implementation
Inspection Sites

Figure 6-2

This bifurcation of responsibility allows the organization to focus on mission accomplishment. The OSIA is structured to implement the treaty, not make policy judgments over compliance. The inspection teams perform a mechanical function to determine compliance. Questions of policy are transmitted to policy makers in the Executive Committee.

However, this does not mean that OSIA is incapable of resolving ambiguities. The extraordinary aspect of OSIA is the extent of dispute resolution mechanisms available. Robert Bowie identified the necessity for dispute resolution mechanisms in 1961. He wrote,

> In considering procedures for determining violations, two alternatives can be conceived: the inspectorate could be required to produce and submit evidence of any violation to an impartial tribunal which would judge the issue like a court; or the evidence could be furnished to the parties for their information and decision as to how to act on it. Some have *taken for granted* that the first method is inevitable or desirable....If the parties have the privilege of how to interpret and act on the suspicious data the deterrent to violation may be enhanced.[60][Emphasis added.]

OSIA provides both alternatives! Because the former was not a taken for granted element of the INF Treaty, the latter option was made an internal characteristic of the on-site inspection process. The inspectors may raise concerns which become part of the inspection report as unresolved ambiguities per Article XI, paragraphs 3 and 4, of the Inspection Protocol. An immediate opportunity to correct evidence of a suspected violation as soon as one is discovered during the on-site

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[60]p. 51, Robert R. Bowie, "Basic Requirements of Arms Control," *Arms Control, Disarmament, and National Security*, ed. Donald G. Brennan, New York: George Braziller, 1961.

inspection enhances the deterrent to violation while simultaneously building cooperation. If an inspector detects a possible violation and the inspectee recognizes and corrects the violation, greater cooperation results since both sides are able to agree on exactly what a violation is.

A case in point is an inspection of ground-launched cruise missiles (GLCM) conducted at Davis-Montham Air Force Base. Even though the missiles being inspected were 20 inches shorter than the standard GLCM pictured in the Memorandum of Understanding, the Soviets inspection report "did not address these differences as treaty ambiguities"[61] and did not act as though the United States was attempting to violate the provisions of the treaty. Much of the groundwork for cooperation like this was prepared before the first inspection took place. For instance, a possible area of dispute could have occurred over photography during the inspection. As a result,

> if an inspector wants a photograph, the escort team takes the inspector's camera and shoots two photos, one for the inspector, one for itself. The sides have agreed that photographs will only be taken when a question about an object or building remains unresolved. Other photographs are not permitted."[62]

A maximum opportunity exists to resolve disputes at the lowest level, at the inspection site. Should this fail, the report is forwarded to the Executive Committee and placed into the policy arena. The INF Treaty expressly established a Special Verification Commission to handle

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[61]p. 107, *On-Site Inspections Under the INF Treaty*, Joseph P. Harahan, United Sates Department of Defense, Washington, D.C., 1993.

[62]p. 26, *Understanding the INF Treaty*, US Arms Control and Disarmament Agency, Washington, D.C., 1988.

disputes which result from inspections. OSIA has no input or influence on the Special Verification Commission. This bifurcation of responsibility of implementation and policy-making, results in a more effective organization since loose coupling gives added flexibility to the lowest levels.

An overlooked bonus of the OSIA is the cooperation which occurs at the lowest level. The teams at the portal sites, on escort, or on inspection create a spirit of cooperation which then transfers throughout both the organization and the external political environment. The taken for granted reality of Russian-American conflict is reconstrcuted from the bottom up. This shift from conflict to cooperation was the result of the direct and immediate impact that the INF Treaty had on national security for both sides. Cooperation was achieved in an area of vital interest, that of nuclear weapons. But the acceptance of the INF Treaty did not automatically change the attitudes of the people who would implement its provisions. By working together in a professional manner on a project of enormous import to each side, the teams slowly built up a level of trust. This trust transceneded interpersonal interactions to the organizational level. The Russian inspector who noted the differences in the GLCMs displayed at Davis Montham Air Force base but did not report them as ambiguities had three years of OSIA history to which he could refer. At no time was there a suggestion that the American were cheating. The level of trust and cooperation tends to increase as the expectation is reinforced with each inspection, escort, and portal monitoring operation. True, the international coopertion did start off on a good note. At one of the first elimination sites in 1988, the Soviets

permitted the American inspectors to take shelter from the rain inside the cannister of an SS-20. Two years earlier, the intelligence community would have been satified to get a clear satellite photo of the cannisters exterior.

VII. ANALYSIS OF IAEA

In contrast to the OSIA, the International Atomic Energy Agency safeguards system is not successful even though it uses on-site inspection as a verification strategy. A major difference is the adversarial nature of the inspections. The host country is inspected according to a scenario that assumes it is cheating. This does not foster a sense of cooperation among the member states. Furthermore, the safeguards agreement is not one between equals since the nuclear states are distinguished from the non-nuclear states. An abbreviated history of the International Atomic Energy Agency helps explain how the agency was established and then an analysis of the organization is conducted using the internal variables discussed earlier.

The Agency's goal is to simultaneously promote the peaceful use of nuclear energy and to implement safeguards on fissile materials resulting from peaceful nuclear energy production. The dilemma facing the IAEA is that nuclear material produced as a byproduct of peaceful nuclear energy production may be used to produce nuclear weapons. The IAEA recognized its nuclear dilemma at its founding in 1956: "how was the optimum balance to be struck between the Agency's developmental role as contributor to peace, health and prosperity throughout the world, on the one hand, and its restrictive role as deterrent against atoms-for-war, on the other?"[63]

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[63]p. 136, Organizing Peace in the Nuclear Age, Arthur N. Holcombe and Inis L. Claude, New York University Press, 1959.

This directly affected the attitude toward safeguards. If safeguards were perceived as excessively stringent, no state would use the IAEA and it would be eclipsed by bilateral and multilateral agreements. If safeguards were loose, peaceful nuclear material could easily be diverted for military weapons and the IAEA would be shut down for failure to control the diversion. The IAEA continues to sit on the horns of this dilemma today. As Secretary of State Dulles said in 1958, "We must realize that atomic energy materials and know-how will spread, Agency or no Agency. But the new IAEA must not make the existing situation worse."[64]

The IAEA attempts to maximize the availability of nuclear energy to the Third World nations while simultaneously attempting to limit the proliferation of fissile material as required by the Nonproliferation Treaty of 1968. The dependent variable, level of cooperation with the Nonproliferation Treaty as measured by the number of states with nuclear arms, has increased from 1957 to date despite the existence of an international treaty and an organization designed to prevent the proliferation of the material necessary for atomic bomb production. This increase in nuclear weapons is a direct result of the IAEA's inability to stem the proliferation of nuclear material under its purview. The nuclear program in Iraq is just one example. Iraq became party to the NPT on 29 October 1969 and entered, in force, into safeguards agreement with the IAEA on 29 February 1972.[65] "The legal basis for inspections is agreements

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[64]p. 146, Organizing Peace in the Nuclear Age, Arthur N. Holcombe and Inis L. Claude, New York University Press, 1959.

[65]p. 93, International Atomic Energy Agency: 1957-1977, International Atomic Energy Agency, Vienna, 1977.

between the IAEA and the state, concluded in the framework of the nuclear Non-Proliferation Treaty, for full-scope safeguards on all nuclear materials."[66] Under the auspices of the Nonproliferation Treaty, the IAEA provided technical assistance to establish a nuclear power program in Iraq in exchange for an agreement by Iraq to undergo full-scope safeguards. As predicted in 1958, the IAEA did make the existing situation in the Middle East worse; Iraq obtained nuclear material and technical knowledge in a relatively short period. The nuclear arms level was dangerously close to achieving a positive number in Iraq before the Gulf War started. The IAEA's involvement in Iraq will only be analyzed up to the end of the 1980s. Iraq may now be identified as a rogue state. The comparison of the IAEA against the OSIA is more similar in pre-Gulf War Iraq.

Given that the amount of nuclear fissile material increased in Iraq despite the safeguards regime, this answers the primary question, it requires an analysis of the independent variables that affected this outcome. The acceptance of safeguards also brought reciprocity, the second question needing to be answered. Although the fear of safeguards among the IAEA members infringing on sovereignty dates back to 1956[67], Iraq was not concerned about the affects of the IAEA safeguards inspection. Iraq evidently wanted nuclear technology and a source of fissile material. In return for

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[66]p. 444, Rudolf Avenhaus and Jack T. Markin, "International Atomic Energy Agency Safeguards," Modeling and Analysis in Arms Control, eds. Rudolph Avenhaus, Reiner K. Huber, and John D. Kettelle, Springer-Verlag, Berlin, 1986.

[67]p. 141, Organizing Peace in the Nuclear Age, Arthur N. Holcombe and Inis L. Claude, New York University Press, 1959.

allowing safeguards inspections, Iraq was allowed to provide inspectors to the IAEA.

Regarding specificity, the third question, the Nonproliferation Treaty is not specific in its definition of nuclear weapon. In fact, the NPT allows for peaceful nuclear explosions. This begs the question of how an explosion is produced without a weapon, except in an accident like Chernobyl. As a result, inspecting for fissile material, not weapons, is the goal of the IAEA safeguards. The idea is to identify the diversion of the critical component of a nuclear weapon, its fissile material. The IAEA does conduct continuous monitoring using cameras as well as on-site inspections of safeguarded sites. The IAEA enjoys a unique status within the United Nations system, it is not fully independent, but it is not subsumed under an existing UN agency. [See Figure 7-1]

ORGANIZATIONAL STRUCTURE
OF THE
INTERNATIONAL ATOMIC ENERGY AGENCY

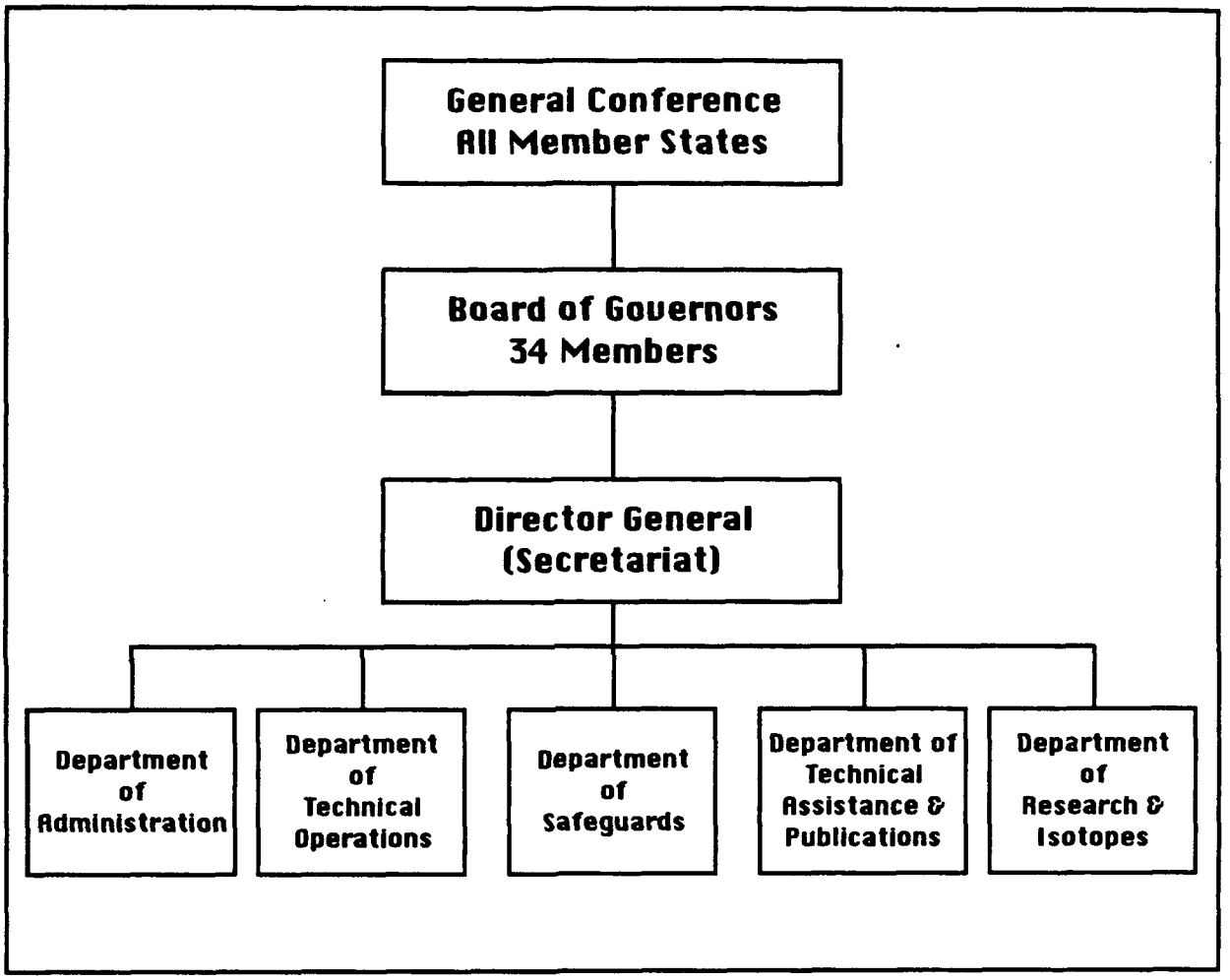

Figure 7-1
[Page 82, International Atomic Energy Agency 1957-1977]

The structure of the IAEA is a mirror of the League of Nations. "The League of Nations operated through three major organs: (a) a Council...; (b) an Assembly, consisting of all the member states...; (c) a permanent Secretariat whose chief officer, the Secretary-General,

was nominated by the Council and approved by a majority of the Assembly."[68] The official terminology for its status is autonomous. In the negotiations on the structure of the IAEA as early as 1954, the "nature and composition of each of these organs as well as the relationships among them"[69] were the most troublesome areas. The goal for the atomic and near-atomic powers was to form an IAEA that resembled "an atomic parallel to the United Nations Security Council."[70] "The eight Western Atomic powers...in the summer of 1954 unanimously agreed that the Agency should be kept as removed from the United Nations as possible."[71] But the Soviets proposed "to subordinate the Agency to the Security council"[72] in the fall of 1954. The result was the that IAEA was neither a subordinate organ nor an independent entity, but became an autonomous international organization. *This meant that the* IAEA would enjoy benefits associated with special agency status in some matters and not in others.[73]

Along with verification responsibility, the IAEA also was a policy making organization. The IAEA was the first UN organization with the authority to initiate sanctions which "had no parallel among

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[68]p. 132, A Short History of International Organization, Gerard J. Mangone, McGraw-Hill Book Company, Inc., New York, 1954.
[69]p. 128, Organizing Peace in the Nuclear Age, Arthur N. Holcombe and Inis L. Claude, New York University Press, 1959.
[70]p. 128, Organizing Peace in the Nuclear Age, Arthur N. Holcombe and Inis L. Claude, New York University Press, 1959.
[71]p. 187, Organizing Peace in the Nuclear Age, Arthur N. Holcombe and Inis L. Claude, New York University Press, 1959.
[72]p. 188, Organizing Peace in the Nuclear Age, Arthur N. Holcombe and Inis L. Claude, New York University Press, 1959.
[73]p. 189, Organizing Peace in the Nuclear Age, Arthur N. Holcombe and Inis L. Claude, New York University Press, 1959.

the specialized agencies."[74] This authority magnifies the main problem of the IAEA by forcing the agency to be both an implementation organization and a policy making body.

This dual responsibility is exacerbated during disputes. The dispute resolution mechanisms are not deep and are unable to resolve problems at a low level because "in the IAEA there is a fairly long and ill-defined communication line marked by a degree of uncertainty of who decides what and when and that is less well designed to achieve timely and definitive resolution."[75] [See Figure 7-2]

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[74]p. 189, Organizing Peace in the Nuclear Age, Arthur N. Holcombe and Inis L. Claude, New York University Press, 1959.

[75]p. 21, *INF and IAEA: A Comparative Analysis of Verification Strategy*, Lawrence Scheinman and Myron Kratzer, Los Alamos National Laboratory, Report # LA-12350, Los Alamos, New Mexico, July 1992.

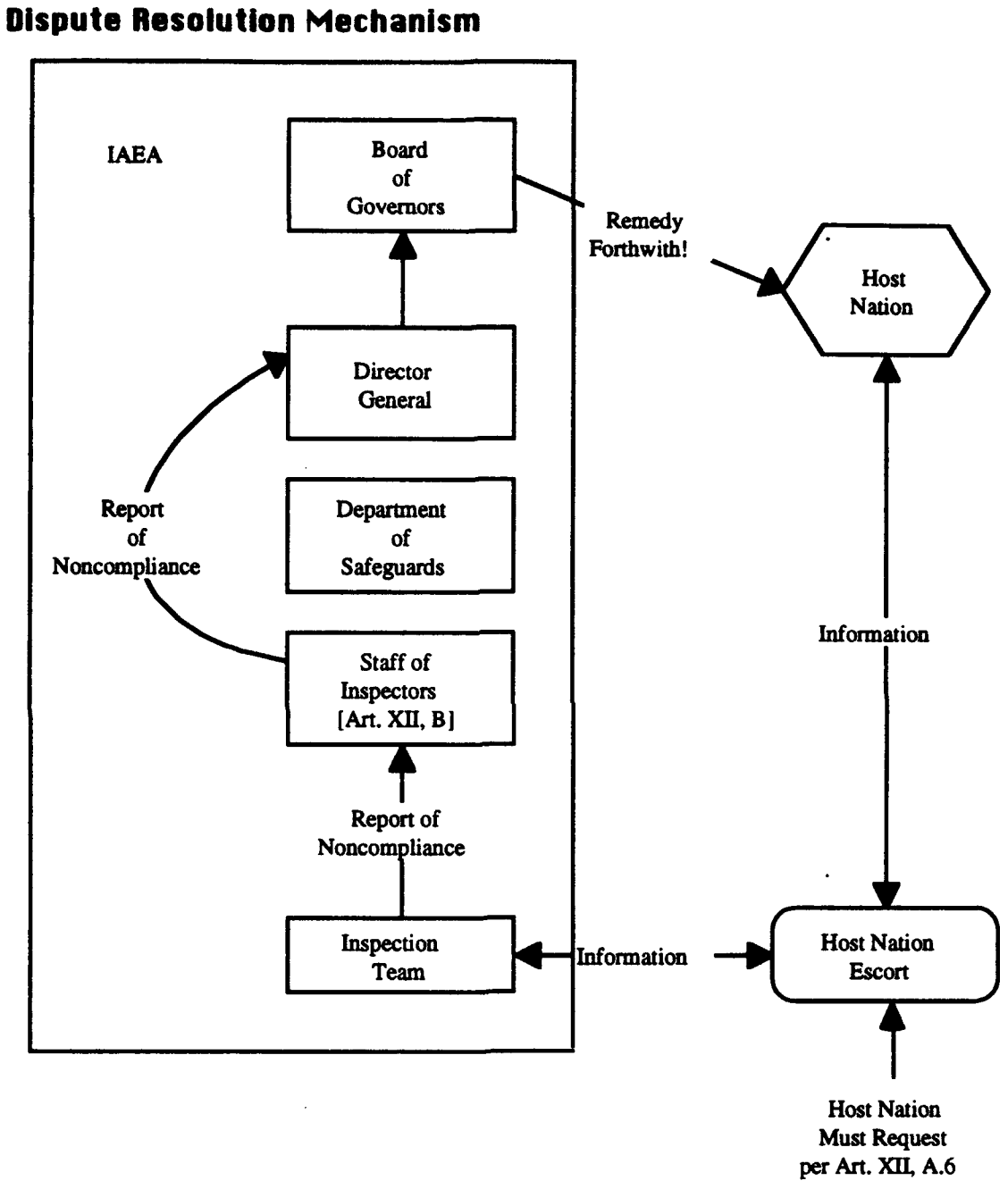

Figure 7-2

The IAEA was the first international organization to conduct on-site inspections at nuclear facilities. Of course these were civilian

nuclear power plants and only those facilities voluntarily submitted were put under safeguards. Nuclear weapon states do not have to place their civilian facilities under the IAEA safeguards program, but most do so voluntarily. Military facilities are off-limits to the IAEA. Only peaceful nuclear material is covered and only those placed under safeguards.[76] Host nation escorts is an interesting feature under the IAEA. The caveat was that the host nation must request to escort the IAEA inspection team according to Article XII, Paragraph A.6 of the IAEA Statute.

If the IAEA is perceived as ineffective, its survival is threatened. A threat to the IAEA's existence would be "a serious and largely unambiguous diversion of materials subject to IAEA safeguards without IAEA detection and under conditions suggesting that the IAEA was not performing its safeguards job in a competent manner."[77] This situation happened in Iraq. The goal of safeguards administered by the IAEA is "to ensure that no non-nuclear weapons states can secretly divert its civilian nuclear materials and facilities to military purposes."[78] Despite the need for safeguards to provide early warning, in 1970 there was "little reason to be confident that presently envisioned safeguards will be effective in providing such

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[76]p. 444, Rudolf Avenhaus and Jack T. Markin, "International Atomic Energy Agency Safeguards," Modeling and Analysis in Arms Control, eds. Rudolph Avenhaus, Reiner K. Huber, and John D. Kettelle, Springer-Verlag, Berlin, 1986.

[77]p. 3-14, "The Prospective Durability of the IAEA Safeguards System and Financing of the System," International Energy Associates Limited, #IEAL-R/86-55III, Fairfax, VA, 24 February 1987.

[78]p. v, "Nonproliferation Treaty Safeguards and the Spread of Nuclear Technology," V. Gilinsky and W. Hoehn, RAND Corporation, Report #R-501, May 1970.

timely warning."[79] In particular, the structure of the IAEA regarding its technologies revealed major shortcomings in the present non-proliferation regime. "By depending upon technologies the I.A.E.A. considered obsolete, the Iraqis were able to make considerable progress without significantly alarming the international community."[80] Even if the IAEA had conducted a flawless safeguards program, as early as 1971 the nuclear community knew that the existence of computational and measurement techniques of nuclear materials had not yet achieved exceptional accuracy and there was a certain possibility for the growth of an uncontrolled quantity of nuclear materials within the nuclear power establishment.

Assuming a perfect safeguards plan, then, it was possible to divert fissile material. Combined with the IAEA looking for newer technology while the Iraqis employed older methods to develop their nuclear program, this results in the scenario dreaded as early as the 1950s; that the IAEA could make the nuclear situation worse. By hoping for the IAEA to prevent the spread of nuclear material, the signatory states to the NPT were lulled into a false sense of security.

A counter argument is that "(o)verexpectation is a central problem for IAEA safeguards."[81] This is an attempt to blunt one of the horns of the agency's dilemma, peaceful use or nonproliferation? The IAEA cannot prevent diversion in states not party to safeguards.

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[79]p. v, "Nonproliferation Treaty Safeguards and the Spread of Nuclear Technology," V. Gilinsky and W. Hoehn, RAND Corporation, Report #R-501, May 1970.

[80]p. vi, "Nuclear Proliferation: Lessons Learned from the Iraqi Case," Todd A. Dixon, Master's Thesis, NPS, December 1992.

[81]p. 43, The Nonproliferation Role of the International Atomic Energy Agency: A Critical Assessment, Lawrence Scheinman, Resources for the Future, Inc. Washington, D.C., 1985.

However, the IAEA must be able to detect diversion in those states with which it has safeguards as in Iraq. If not, the IAEA must be judged as ineffective and therefore unnecessary. The IAEA views its role concerning safeguards as one of "*verification* and confidence building."[82] [Italics in original] The role of safeguards "primarily is one of assurance, verification, deterrence, and detection. It is not prevention."[83] But if safeguards do not detect, they should not continue. Otherwise, they provide a false sense of security. If safeguards were to "sound the alarm in case of diversion,"[84] the Iraq case indicates the alarm may be broken.

Another aspect of the IAEA structure is the way in which a safeguards inspection is conducted.

> Although IAEA safeguards are applied in a collaborative spirit with the state cooperating in the implementation of inspections, the development of the safeguards approach is adversarial in its assumption that violations of safeguards agreements may occur. This assumption is essential in planning safeguards activities to assure other states that IAEA safeguards are valid....For each facility type, IAEA systems studies have identified potential scenarios for undeclared removal of material from a facility or from its assigned location in the facility, undeclared introduction of material into a facility and undeclared modification of material....The safeguards approach is designed to detect

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[82]p. 44, The Nonproliferation Role of the International Atomic Energy Agency: A Critical Assessment, Lawrence Scheinman, Resources for the Future, Inc. Washington, D.C., 1985.

[83]p. 48, The Nonproliferation Role of the International Atomic Energy Agency: A Critical Assessment, Lawrence Scheinman, Resources for the Future, Inc. Washington, D.C., 1985.

[84]p. 62, The Nonproliferation Role of the International Atomic Energy Agency: A Critical Assessment, Lawrence Scheinman, Resources for the Future, Inc. Washington, D.C., 1985.

anomalies in facilities operations that would be created by the postulated scenarios.[85]

This adversarial approach engenders noncooperation but "the effectiveness of the IAEA's safeguards...depends significantly on the safeguarded state fulfilling its obligation to cooperate with the IAEA."[86] The adversarial approach continues despite evidence to the contrary. The Exxon Nuclear low-enriched uranium fuel fabrication plant in Richland, Washington was the first US bulk handling facility to be selected by the IAEA for inspection. Between March 1981 and November 1983, 12 IAEA inspections were carried out, including three physical inventory verifications. A cooperative non-adversarial approach was found to be the best approach for success.[87] Instead of providing a framework for constructing cooperation, the adversarial approach prevents it from happening. An interesting point is that this was the first such inspection within the United States. This indicative of the sovereignty issue and that not all states are equal according to the treaty.

A final comment on the IAEA structure is the lack of a bifurcation of responsibility. Although established as a technical agency for assistance in peaceful nuclear energy and safeguards, the dual-hat nature of the IAEA as policy maker and implementer hinders its operations. "The interdependence of the Agency's

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[85]p. 445-446, Rudolf Avenhaus and Jack T. Markin, "International Atomic Energy Agency Safeguards," Modeling and Analysis in Arms Control, eds. Rudolph Avenhaus, Reiner K. Huber, and John D. Kettelle, Springer-Verlag, Berlin, 1986.

[86]p. 16, "Case Study of the International Atomic Energy Agency (IAEA)," MIIS IONP Project, David Fischer, 12 June 1993

[87]Abstract, "Documentation and Analysis of IAEA Safeguards Implementation at the Exxon Nuclear Fuel Fabrication Plant," R. A. Schneider, Exxon Nuclear Company, Report #XN-NF-84-86, Contract #AC1NC108, October 1984.

technical subjects within its security and political environment make it an attractive target for political opportunism."[88] From within the IAEA and from without, the combination of policy and execution causes unnecessary friction that adds to the perception of inefficiency. The IAEA is seen as unable to carry out its own policies. Tight coupling causes all actions to be politicized thereby reducing action and making execution more difficult.

The IAEA is fighting for survival. The structural indicator of efficiency as a process is no longer part of the claim to legitimacy. Even though "during 1991 the IAEA performed approximately 2,200 on-site inspections at 475 facilities in 58 member states with the assistance of over 200 IAEA inspectors,"[89] lately, efficiency as a measurable outcome, i.e., a decrease in nuclear fissile material, is playing a larger role in legitimacy. But the IAEA is slow to react. Into a resolution by the UN General Assembly, which corresponded to the annual report required by the IAEA, a paragraph was added to the standard text commending the IAEA for its "actions in response to Iraqi noncompliance...and its role in implementing Security Council resolutions 687 and 707...."[90] The IAEA attempts to maintain its rationalized myth and its isomorphism with that myth in order to survive. Otherwise, the fact that the IAEA had been in Iraq for over

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[88]p. 35, The Nonproliferation Role of the International Atomic Energy Agency: A Critical Assessment, Lawrence Scheinman, Resources for the Future, Inc. Washington, D.C., 1985.

[89]p. 215, *United States Participation in the United Nations*, Department of State Publication 9974, Bureau of International Organization Affairs, Government Printing Office, Washington, D.C., 1992.

[90]p. 218, *United States Participation in the United Nations*, Department of State Publication 9974, Bureau of International Organization Affairs, Government Printing Office, Washington, D.C., 1992.

two decades, even complimenting Iraq as a model safeguards state, may fracture the perception of the IAEA as an effective organization in the safeguards business.

VIII. ANALYSIS OF UNSCOM

The United Nations Special Commission on Iraq is an example of an organization which resulted from a modern agreement trying to solve the problems of enforcing arms control compliance. The initial indications are that it is successful, that it is working better than the Inter-Allied Commissions of Control did in post-war Germany.

After Desert Storm, the United Nations created a separate international arms control organization to destroy chemical and biological weapons, and the missile systems which could carry them. Resolution 687 created "a special commission to oversee elimination of weapons of mass destruction."[91] Resolution 687 also

> called for the formation of a Special Commission to find and destroy Iraqi weapons of mass destruction-chemical, biological, and nuclear-and the means to deliver them. It established coordination with the International Atomic Energy Agency (IAEA) to deal with Iraq's clandestine program to acquire nuclear weapons. Most importantly, the resolution prohibited Iraq from developing such weapons in the future and laid the groundwork for the establishment of a mechanism for international monitoring of Iraq's compliance with this prohibition.[92]

The IAEA was tasked to destroy the nuclear material. The goal of the United Nations Special Committee (UNSCOM) was clear,

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[91] p. 6, *United States Participation in the United Nations,* Department of State Publication 9974, Bureau of International Organization Affairs, Government Printing Office, Washington, D.C., 1992.

[92] p. 7, *United States Participation in the United Nations,* Department of State Publication 9974, Bureau of International Organization Affairs, Government Printing Office, Washington, D.C., 1992.

elimination of weapons of mass destruction. From the UN Resolutions, the structure of UNSCOM initially looked like this:

UNSCOM Per UN Resolutions

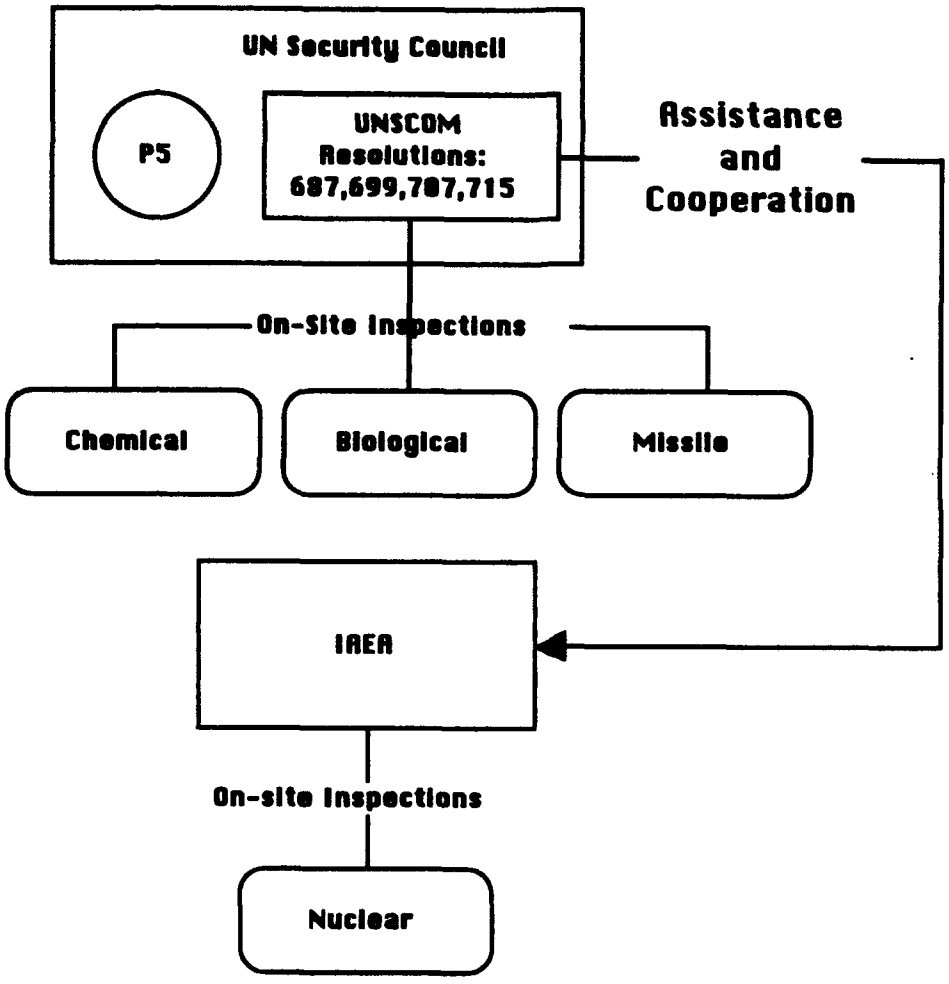

Figure 8-1

The UN recognized the need for an implementation organization which did not do things "the UN way." The organization chart easily demonstrates the differences between the IAEA and UNSCOM.

UNSCOM is structured to accomplish one thing, destruction of weapons. This provides a clear framework for the subordinate elements. Furthermore, UNSCOM is in practice almost exactly what the original plan for the IAEA was in theory. Instead of being an independent nuclear security council, UNSCOM works for and reports directly to the actual UN Security Council. The Security Council may establish agencies which assist the functioning of the Council. The structure evolved further by May 1991 to look like this:

UNSCOM: Structure & Duties May 1991

Source: Defense Intelligence Agency

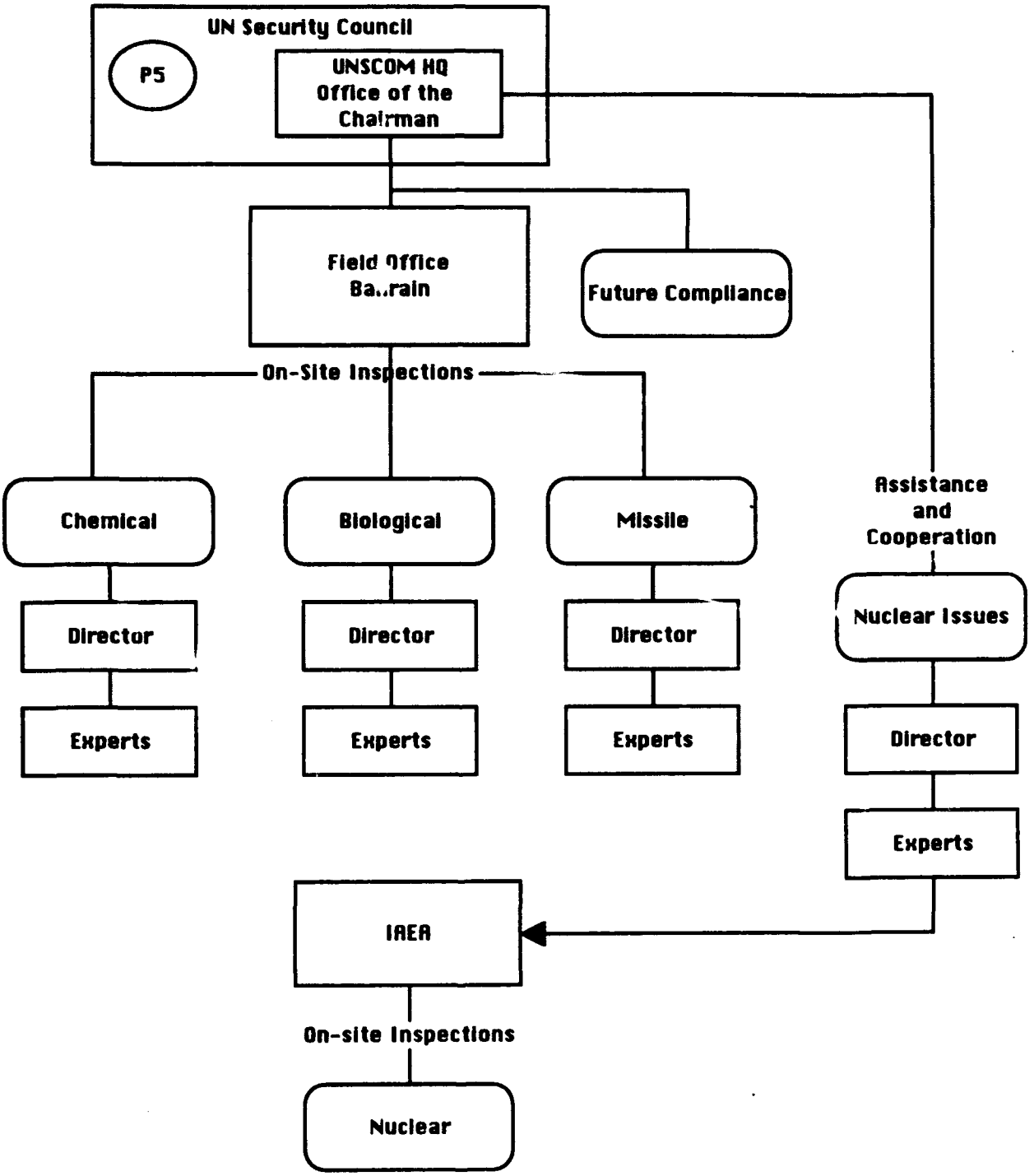

Figure 8-2

UNSCOM has a direct link to the Security Council and remains a fairly small organization.. This allows for greater speed when decisions are made and helps improve the level of integration. It is easy to communicate within the organization to determine how inspections are flowing at other sites. The level of differentiation is appropriate to the mission of the organization as outlined in the applicable UN resolutions.

An interesting development in UNSCOM's structure is the emergence of a Special Commission which is wholly distinct from the Office of the Chairman. [See Figure 8-3]

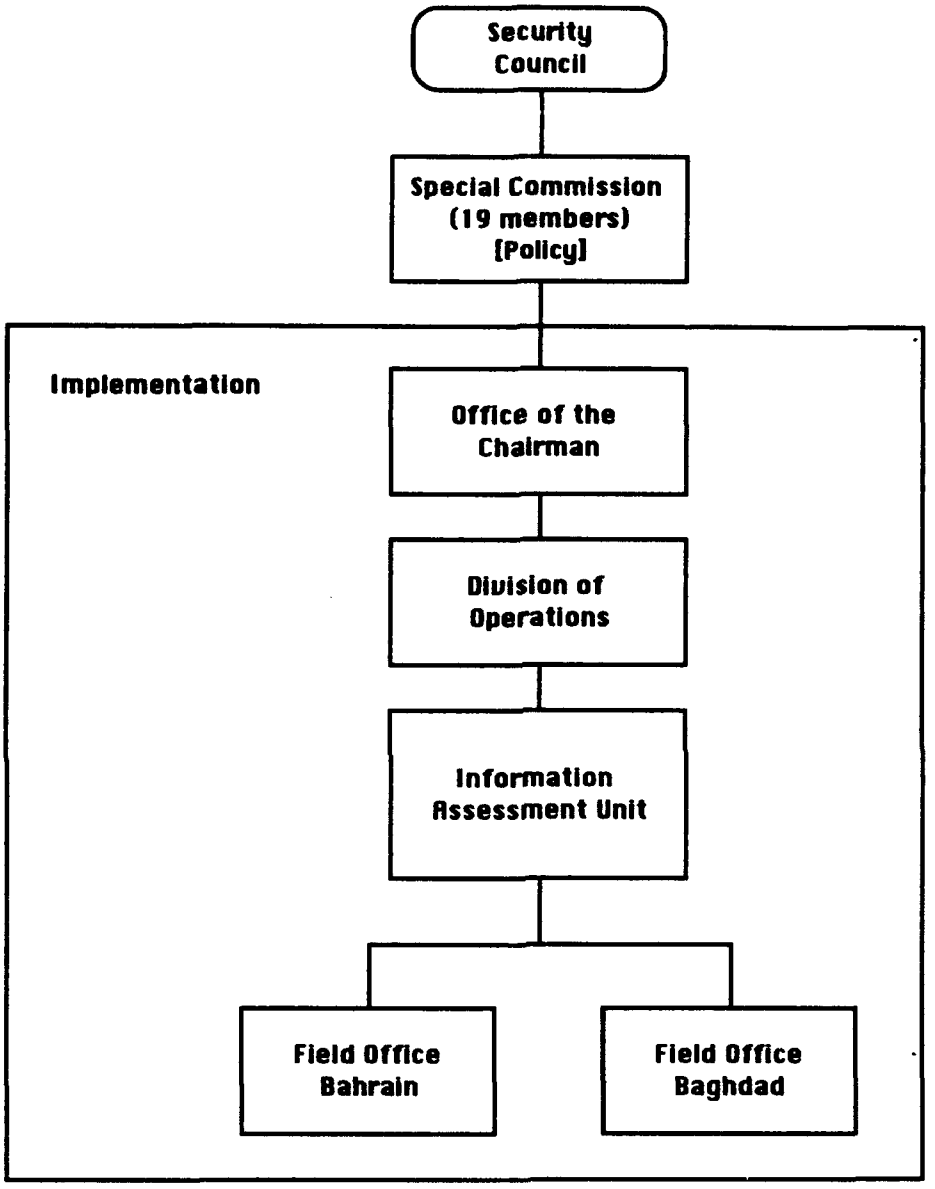

Figure 8-3

The Office of the Chairman includes 11 people besides the UNSCOM Chairman himself. [See Figure 8-4] An intermediate level now exists between the Office of the Chairman and the Security Council.

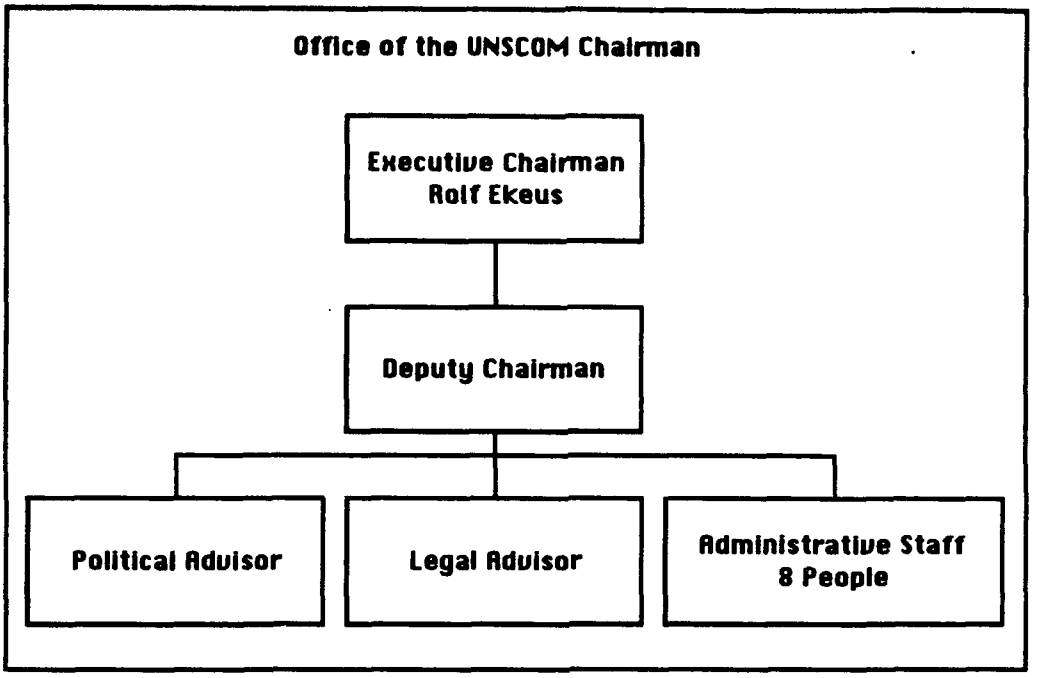

Figure 8-4

Evidently, UNSCOM has learned the value of bifurcation of responsibility. This may be directly attributable to the assistance which the OSIA provided to UNSCOM beginning in July 1991. OSIA "has provided chemical and nuclear weapons experts, linguists, U.S. surveillance flights and some staff personnel on loan to the U.N. commission in New York to support what appears to be a long-term effort."[93] The elimination of Iraqi weapons of mass destruction continues, although some snags were encountered. Nonetheless, UNSCOM discovered seventeen sites related to nuclear weapons

[93]p. 13, "Trust, But Verify!" Major General Robert W. Parker, Defense 93, Issue #1, American Forces Information Service.

research in Iraq after Desert Storm.[94] Declared chemical and biological sites have also been inspected and weapons have been eliminated.

This process is important for establishing organizational effectiveness. The allocation segment for the INF Treaty was handled by a Presidential directive ordering the establishment of the OSIA. For Resolution 687, this was accomplished by the UN Security Council ordering the creation of UNSCOM. However, Resolution 687 provided broader, more extensive inspection authority for nuclear material. Criteria setting was very well done in the INF Treaty since the treaty details what must be done before, during, and after on-site inspections. How the task is accomplished is left to the OSIA. Criteria setting in the Iraq scenario is both very clear and quite vague. The task properties for UNSCOM and the IAEA in post-war Iraq are clear, eliminate all nuclear, chemical, biological weapons and the associated missiles. Unlike the INF Treaty, the specific descriptions of these weapons is not included and opens a possible means for misinterpretation, deliberate and otherwise. The vagueness creeps in at this point as each side haggles over what constitutes a particular type of weapon which then falls under the category of 'all' types of disputed weapons to be destroyed. Sampling in the INF Treaty is possible through comparing two key indicators, the baseline on-site inspection figures and the elimination inspection reports from each site. For Resolution 687, a similar

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[94]p. vi, "Nuclear Proliferation: Lessons Learned from the Iraqi Case," Todd A. Dixon, Master's Thesis, NPS, December 1992.

approach is possible. The UN looks at the weapons declared on-hand by Iraq and at the total number destroyed by UNSCOM.

UNSCOM does not allow for reciprocity. The organization is designed for a specific mission in a single country. Iraq is expected to cooperate, but no Iraqis are part of the inspectorate. The inspectors are running into a problem with specificity. Similar to the problems encountered by the Inter-Allied Commissions of Control under the Versailles Treaty, the UNSCOM inspectors have difficulty with Iraq's classification of weapons. Each site seems to require more explicit and elaborate definition of what a chemical or biological weapons is and what is considered a component part of that weapon.

The UN nearly fell into to another pitfall of Versailles, funding. Iraq was responsible for the funding of all efforts of UNSCOM and allied activities in the aftermath of the war. The Security Council emphasized that Iraq was fully liable for all costs associated with carrying out Resolution 687. Until Iraq could pay, member states were encouraged to contribute. However, the UN soon realized that some money was better than none and authorized the sale of oil to offset costs.

UNSCOM is an independent agency, solely responsible for eliminating weapons of mass destruction in Iraq, and answers only to the UN Security Council. As mentioned, UNSCOM does not appear to be involved in policy making. This task is left to the supervisory Special Commission and the UN Security Council.

Dispute resolution mechanisms are not available. The inspectors have the authority to dictate terms to the Iraqi government representatives at the site. The inspections are on-site

and do involve host nation escorts. Host nation escorts are needed to prevent attacks by local Iraqi factions, incited by Saddam Hussein no doubt, against the UN representatives. In spite of these challenges, UNSCOM appears to be an efficient organization since the declared Iraqi weapons are destroyed.

Organizational learning did occur as evidenced by the addition of an intermediate policy section after implementation phase had begun. Not much room for dispute resolution is available which stifles the opportunity for a cooperative framework to be constructed. Of course, most of the blame for the conflictual nature of the inspections rests with Iraq. As Tim Trevan, the advisor to the Executive Chairman of UNSCOM wrote:

> Each Time Iraq lies or obstructs operations, the burden of proof to convince UNSCOM increases; each time Iraq seeks to circumscribe its rights, UNSCOM's suspicion of Iraq's intent increases and so does the threshold of proof of good intent.[95]

Iraq must break this habit and provide consistent cooperation if it expects to achieve cooperation in other areas separate from those related to UNSCOM.

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[95]p. 15, Tim Trevan, "UNSCOM Faces Entirely New Verification Challenges in Iraq," Arms Control Today, April 1993.

IX. FUTURE ARMS CONTROL ORGANIZATIONS

In the post-Cold War era, arms control can play a role in the development of international cooperation. Nations are very concerned with issues dealing with national security. By providing a forum for interaction in the area of arms control, the possibility exists for reconstructing the taken-for-granted realities of the past half century. The very structure of the arms control organization itself is a significant factor in its success or failure. Deciding what the structure of the organization will be will shape the cooperation opportunities available. The organization should not be a cooperative and an enforcement type agency simultaneously. The IAEA tries to do both, but it ends up unable to do it all. This chapter focuses on an arms control organization still under construction and then describes a model international arms control organization as a guide to policy makers.

The recent Chemical Weapons Convention gives the international community cause for hope in the field of arms control. At first glance, the OPCW exhibits positive and negative features. The Organization for the Prohibition of Chemical Weapons (OPCW) appears to be modeled on the IAEA, yet significant differences are incorporated. [See Figure 9-1]

Organization for the Prohibition of Chemical Weapons

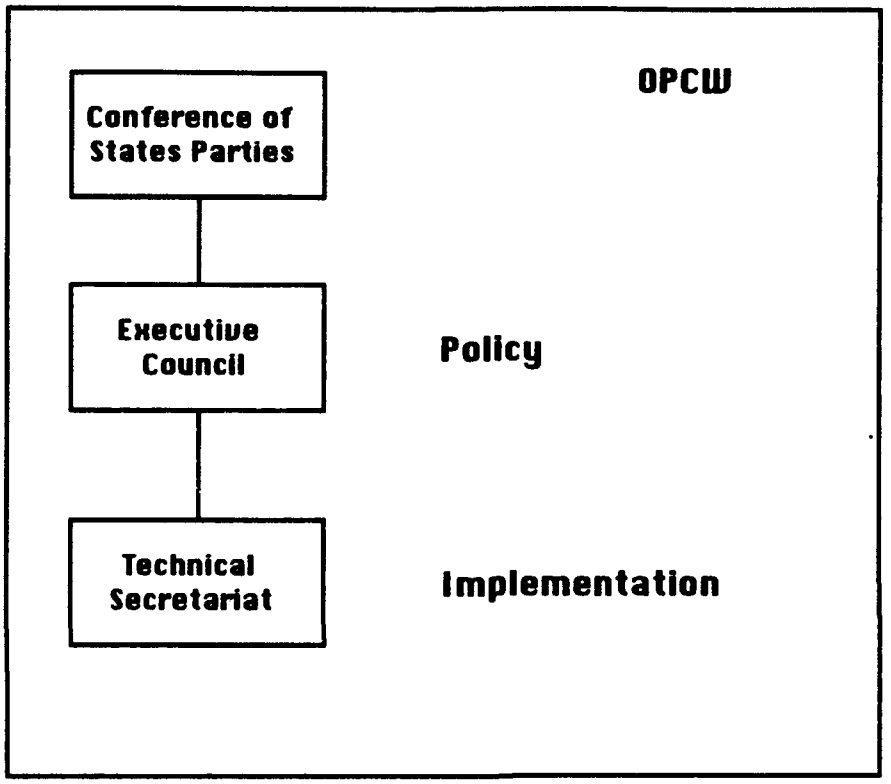

Figure 9-1

Similar to the IAEA, the OPCW must not hamper the economic or technical development of member states in the areas agreed to in accordance with Article XI of the Chemical Weapons Convention. The OPCW attempts to hinder the proliferation of chemical weapons while avoiding adverse affects on legitimate civilian chemical manufacturers, e.g., fertilizers. The resembles the IAEA's mandate to assist the peaceful nuclear programs while hindering nuclear proliferation. The three-tiered organization also looks like the IAEA;

General Assembly, Board of Governors, and the Secretariat. If the OPCW fully models itself after the IAEA, "some IAEA policies...may hamper the ability to detect or even deter diversion. Analogous policies for the CWC case could result in minimal intrusiveness, but could also limit the effectiveness of verification."[96]

Fortunately, organizational learning did occur as the OPCW bifurcates responsibility in the Secretariat, unlike the IAEA which does not. The Technical Secretariat of the OPCW is only involved in implementation and dispensing advice. Policy decisions are the purview of the Executive Council. The OPCW is still under development in the Hague and so a deeper analysis of the organizational structure is not possible yet. The critical test is yet to be performed, the on-site inspections. However, the organization does show signs of possible success decreasing the level of chemical weapons in the world inventory.

A more challenging opportunity is the possibility of a new international organization that could handle the myriad of on-site responsibilities which will arise as new agreements, treaties, and conventions are signed. The OPCW seems to have learned from the OSIA while still using the IAEA as a base model. However, the

> initial mix of resources that are mobilized at the creation of a particular organizational form are critical in that they constitute a structural pattern that tends to persist- imprinting the organization with characteristics that are preserved across succeeding generations of that form.[97]

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[96]p. x, Domestic Implementation of a Chemical Weapons Treaty, J. Aroesty, K. A. Wolf, and E. C. River, RAND Corporation, Report # R-3745-ACQ, October 1989.
[97]p. 163, W. Richard Scott, Organizations: Rational, Natural, and Open Systems, Prentice-Hall, Inc., Englewood Cliffs, NJ, 1981.

Among the alternatives proposed to remedy the IAEA by an International Energy Associates Limited study are the establishment of a new international organization or, a variant to this, modification of the Statute to separate the IAEA safeguards from other promotional programs.[98] My recommendation is similar, bifurcation of responsibility within the existing IAEA or creating an International On-Site Inspection Agency. A new agency would be a way to dampen the urge for proliferation. Since nearly all countries are a party to the NPT, the West(particularly the US) should trumpet the adherence to Article VI that calls for nuclear states to undertake good faith negotiations on effective arms control and disarmament measures. The best example of this is the INF Treaty. Additionally, the "United States introduced...resolution 46/26, 'Compliance with arms limitations and disarmament agreements.' Adopted by consensus, the resolution urged all parties to implement and comply with the entirety of the spirit and provisions of such agreements...."[99] Compliance and cooperation are possible when conditions for their construction are provided.

The new international organization cannot rely on technical means since it

> is generally agreed that surveillance by NTM alone will be inadequate for treaty monitoring of technologically advanced countries and that verification, to be effective,

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[98]pp. 5-17&5-18, "The Prospective Durability of the IAEA Safeguards System and Financing of the System," International Energy Associates Limited, #IEAL-R/86-55III, DTIC #AD-A201842, Fairfax, VA, 24 February 1987.

[99]p. 49, *United States Participation in the United Nations*, Department of State Publication 9974, Bureau of International Organization Affairs, Government Printing Office, Washington, D.C., 1992.

will require a combination of NTM, monitoring, and routine on-site inspection (OSI) of declared facilities.[100]

A new international organization that conducts on-site inspections and monitoring functions would help foster international cooperation.

When nations are involved in arms control agreements that directly relate to national security affairs, the framework for cooperation is readily available. Given a signed and ratified agreement, the next most important factor is the structure of the implementation organization. The organization should improve, not worsen, the existing situation. This new agency, for ease of reference it will be called the International On-Site Inspection Agency (IOSIA), should answer the same questions as previous arms control organizations. The IOSIA should be a reciprocal organization. Individual nation-states must maintain the ability to verify those agreements which it signs. Member states should be able to use the IOSIA to train participants on the applicable treaties and to conduct mock inspections. This provides an even playing field and gives all sides an idea of what to expect during inspections. This sort of transparency is not difficult to achieve if the associated treaty or convention is specific regarding weapons undergoing inspection. Although some flexibility is lost, increasing the specificity reduces the possibility of misinterpretation and dampens the possibility of a dispute. Should a dispute arise, an effective, low-level ability to resolve it must be available. The dispute resolution mechanisms

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[100]p. vii, Domestic Implementation of a Chemical Weapons Treaty, J. Aroesty, K. A. Wolf, and E. C. River, RAND Corporation, Report # R-3745-ACQ, October 1989.

must be swift, available at the point of inspection, and provided at each successive level through the IOSIA.

Ideally, dispute resolution mechanism should also reside in the policy-making arena. A vital aspect of the IOSIA is that policy and implementation responsibilities would be bifurcated. IOSIA would be an implementation organization only. Furthermore, the IOSIA would be an independent agency. [See Figure 9-2

Proposed International On-Site Inspection Agency and the UN

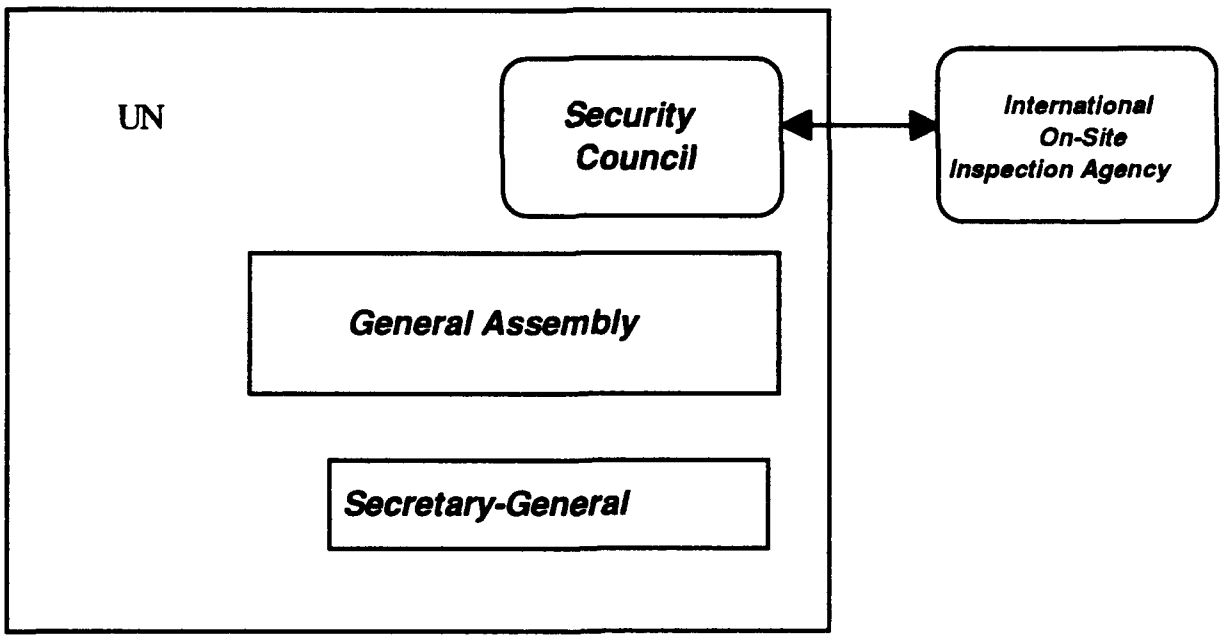

Figure 9-2

Inspection would be on-site. This serves two purposes. The first is the obvious verification mission. On-site inspections provide a good

indicator of how well the inspected party is complying with an agreement. The second purpose is to force interpersonal contacts to establish mutual respect and cooperation. As IOSIA conducts inspections of various member states, the feedback to all other signatory states is multiplied by the international character of the organization. Nations desiring to establish their desirability for additional or expanded cooperation is other areas, e.g., economic, could construct a social reality to convince other states that they are worthy of trust. Host nation escorts play a key role, though not within the IOSIA itself. Host nation escorts are necessary in that the host nation retains responsibility, as a sovereign state, to ensure verification of those treatise which it signs. The IOSIA could not take that duty away.

IOSIA would be a matrix type of organization, given the interrelated aspects of modern weapons. The Coordination teams would share and transmit information from the sub-specialty divisions across the organization in the Area of missile weaponry. The active involvement of a state's military would be very important. In the final analysis, a greater level of cooperation would result. IOSIA could provide a steppingstone to those states who wish to increase domestic spending by decreasing military hardware outlays and simultaneously alleviate the risk of unilateral disarmament through interaction participation in the IOSIA. Volunteers would be required to have a high level of participant, motivation. Motivation would also be buoyed by contributing to national security of member states. Financing could be pro-rated to the level of involvement in the IOSIA. A state with large quantities

of weapons would have to pay a proportionally higher share of expense compared to one without those weapons, or with fewer numbers.

On-site inspection is not a panacea for arms control. However, the interactions that take place during inspections, not possible when using satellites or other technical devices, may promote the overall level of cooperation as the level of arms decreases. Nor does this mean total and complete disarmament. IOSIA would provide a mutual, interdependent sense of verifiable levels of armament agreed to under international consent. Since armaments play a vital role in national security, the attention given to these arms control endeavors would not wane. Cooperation garnered in this area could then be expanded to other international areas of interest. In this way, the world could move from containment of opposing forces to enlargement of international cooperation in all sectors.

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